

## **II. STRATEGIC ELEMENTS**

The Unified or Combined State Plan must include a Strategic Planning Elements section that analyzes the State's current economic environment and identifies the State's overall vision for its workforce development system. The required elements in this section allow the State to develop data-driven goals for preparing an educated and skilled workforce and to identify successful strategies for aligning workforce development programs to support economic growth. Unless otherwise noted, all Strategic Planning Elements apply to Combined State Plan partner programs included in the plan as well as to core programs.

### **ECONOMICA, WORKFORCE, AND WORKFORCE DEVELOPMENT ACTIVITIES ANALYSIS**

The Unified or Combined State Plan must include an analysis of the economic conditions, economic development strategies, and labor market in which the State's workforce system and programs will operate.

#### **ECONOMIC ANALYSIS**

The Unified or Combined State Plan must include an analysis of the economic conditions and trends in the State, including sub-State regions and any specific economic areas identified by the State. This must include-

##### **Existing Demand Industry Sectors and Occupations**

Provide an analysis of the industries and occupations for which there is existing demand.

##### **Emerging Demand Industry Sectors and Occupation**

Provide an analysis of the industries and occupations for which demand is emerging.

#### **EMPLOYER'S EMPLOYMENT NEEDS**

With regard to the industry sectors and occupations identified in 1 and 2 above, provide an assessment of the employment needs of employers, including a description of the knowledge, skills, and abilities required, including credentials and licenses.

#### **EXECUTIVE SUMMARY**

The Tennessee economy continued its growth in 2017, with nonagricultural employment increasing from 2,965,500 to 3,010,000. The average number of employing establishments grew, the state labor force expanded, and state unemployment rates continued their decline. Per capita income advanced at a greater rate than the U.S. in 2015-2016 as average wages rose and poverty rates declined somewhat. The short-term job outlook is for annual average employment growth of at least 1.8 percent through the third quarter of 2019, with expected total openings of 840,820 over the two year period. From 2015 to 2016, non-fatal injuries and illnesses on the job were also reduced.

#### **EMPLOYMENT**

Nonagricultural employment increased by nearly 1.5 percent from 2016 to 2017, at a pace somewhat slower than from 2015 to 2016. The result was 44,500 new jobs created in the state from 2016 to 2017. All metropolitan statistical areas increased in employment except Cleveland.

#### **EMPLOYERS**

The average number of establishments increased by 2.4 percent over the year. Total payroll increased to \$139 billion in 2017, one and a half times higher than in 2016. Seventy counties had a net increase in employing establishments in 2017.

#### **LABOR FORCE AND DEMOGRAPHICS**

Total population increased 1 percent over the year. Even as the labor force increased to 3,198,800 in 2017, the number of unemployed decreased by 29,100 to an annual average of 118,600. The average unemployment rate dropped from 4.7 percent in 2016 to 3.7 percent in 2017.

## **WAGES AND INCOME (AND POVERTY)**

The Tennessee average annual wage increased nearly 1.7 percent in 2016-2017. The median wage, with half of the employees earning more and half less, improved over the year by 3.3 percent, bringing the state median wage to \$33,870. Production wages increased from \$18.58/hour in 2016 to \$19.40/hour in 2017. Per capita, personal income was \$43,326, while the rate of poverty was 17.2 percent.

## **JOB OUTLOOK**

One measure of the job outlook is the number of unemployed individuals compared to the number of jobs posted monthly on the job seeker website jobs4tn.gov. From June 2016 to June 2017, the number of unemployed remained less than the number of job postings, as the state remained a jobseekers' market. Job growth through 2019 was expected to be at least 1.8 percent annually.

## **SAFETY ON THE JOB**

Safety on the job increased from 2015 to 2016 with a reduction in nonfatal injuries and illnesses to 3.0 per 100 full-time equivalent workers.

## **DETAILED INDUSTRY ANALYSIS**

Twenty industries comprise more than two of every three jobs in Tennessee. The top five industries include food services and drinking places, educational services, administrative and support services, ambulatory health services (outpatient), and hospitals. More people are now employed in outpatient healthcare settings (148,424) than in hospitals (142,369). These industries are also the top five in terms of employment in the East Region and West Region; however, in the Middle Region professional, scientific, and technical services rank fourth in employment. Transportation equipment manufacturing is the only manufacturing industry among the top 10 industries in the East and Middle regions, with none in the top 10 in employment in the West; however, paper, petroleum and coal, and miscellaneous manufacturing are among the ten 10 industries in the West paying the highest annual average wages.

## **DETAILED OCCUPATIONAL ANALYSIS**

The industries expected to grow most rapidly through 2019 are identified in the Job Outlooks section. Although the service-providing sector is expected to grow almost three times as fast as the goods-producing sector, manufacturing and construction are still expected to experience positive growth, with construction expected to create more than 4,000 jobs during the 2017-2019 projection period. More rapid growth in the professional and business services, financial activities, and leisure and hospitality industries will boost employment in the computer and mathematical and business and financial occupations, as well as for office and administrative occupations such as customer service representatives. Healthcare support is expected to be the third fastest-growing group. The top three critical skills in terms of growth are speaking, active listening, and reading comprehension.

Information is included on Middle-Skill occupations (those requiring less than a four-year degree) that are in demand, their 2017 annual average wages, and their current supply/demand outlook on jobs4tn.gov. If listed occupations have certifications aligned with Tennessee high school career and technical education programs, an indicator is displayed in the last column in the table.

## **WORKFORCE IN THE EAST, MIDDLE, AND WEST REGIONS**

Population in 2017 for the state was estimated at 6,715,984, increasing by one percent over 2016. All three regions increased in population, with the Middle Region adding an additional 46,333 people. Average unemployment rates declined in all areas. The West continues to have the highest unemployment rates, including among youth. College educational attainment in the East was slightly below the state average. The state poverty rate (2016) has declined

somewhat to 17.2 percent, with the West Region higher at 20.6 percent. The East Region has the highest rate of those unemployed with a disability (15.4 percent).

## SUSTAINABLE BARRIERS TO EMPLOYMENT

Two tables contain numbers of individuals in each of the nine local workforce development areas with substantial barriers to employment. Collection of these data is ongoing and will be provided to workforce services partners as it becomes available. In the fiscal year ending June 2018, almost 2,000 individuals were involved in recovery courts in Tennessee.

## CONCLUSION

Tennessee continues on the path of positive employment growth and increasing population with historically low unemployment rates and some increases in educational attainment and wages. Information on the significant numbers of individuals who face substantial barriers to employment as identified by the Workforce Innovation and Opportunity Act will provide the newly created Local Workforce Development Areas information for strategic planning on those they have the potential to serve.

## STATEWIDE EMPLOYMENT

Tennessee's average annual nonfarm employment increased 1.5 percent from 2016 to 2017, adding 44,500 jobs. Goods-producing jobs grew at a rate of 2.1 percent compared to 1.6 percent for private service-providing jobs. Jobs in the government sector grew at 0.5 percent. In the goods-producing sector, manufacturing and mining, logging, and construction each grew by 4,900 jobs.

Among the private service-providing industries, those with the largest job increases were leisure and hospitality which added 10,200 jobs, and education and health services which added 8,000 jobs. Within the leisure and hospitality sector, accommodation and food services accounted for 8,300 of the added jobs while healthcare and social assistance accounted for 7,100 of the 8,000 jobs added in education and health services.

Since 2012, Tennessee has added 295,000 jobs, a 10.9 percent increase. Professional and business services led the way adding 67,500 jobs. Of those jobs, 31,700 were added in administrative support, waste management and remediation services, and 25,200 were added in professional, scientific and technical services. Other sectors gaining over 25,000 jobs included durable goods manufacturing; trade, transportation and utilities; healthcare and social assistance; and accommodation and food services. Only federal government has experienced a decline since 2012.

**Table 1: Tennessee Industry Employment, 2012-2017**

Industry Employment (in thousands)	2012	2016	2017	16-17	16-17 %	12-17	12-17 %
<b>Total Nonfarm</b>	2715.0	2965.5	3010.0	44.5	1.5%	295	10.9%
<b>Goods Producing</b>	422.2	463.0	472.9	9.9	2.1%	50.7	12.0%
<b>Mining, Logging, &amp; Construction</b>	108.9	119.1	124.0	4.9	4.1%	15.1	13.9%
<b>Manufacturing</b>	313.4	343.9	348.8	4.9	1.4%	35.4	11.3%
<b>Durable Goods Manuf.</b>	193.9	219.2	222.0	2.8	1.3%	28.1	14.5%
<b>Non Durable Goods Manufacturing</b>	119.5	124.7	126.8	2.1	1.7%	7.3	6.1%
<b>Private Service-Providing</b>	1871.1	2074.5	2107.0	32.5	1.6%	235.9	12.6%
<b>Trade, Transportation, &amp; Utilities</b>	575.0	617.3	621.0	3.7	0.6%	46	8.0%
<b>Wholesale Trade</b>	120.4	119.5	121.1	1.6	1.3%	0.7	0.6%
<b>Retail Trade</b>	312.8	333.8	334.8	1	0.3%	22	7.0%
<b>Transportation &amp; Utilities</b>	141.8	164.0	165.1	1.1	0.8%	23.3	16.4%

<b>Information</b>	43.2	45.3	45.6	0.3	0.7%	2.4	5.6%
<b>Financial Activities</b>	137.1	153.1	158.1	5	3.3%	21	15.3%
<b>Finance &amp; Insurance</b>	105.3	115.0	118.4	3.4	3.0%	13.1	12.4%
<b>Real Estate, Rental &amp; Leasing</b>	31.8	38.1	39.8	1.7	4.5%	8	25.2%
<b>Professional &amp; Business Services</b>	339.1	404.3	406.6	2.3	0.6%	67.5	19.9%
<b>Professional, Scientific &amp; Technical Services</b>	110.9	132.1	136.1	4	3.0%	25.2	22.7%
<b>Management of Companies &amp; Enterprises</b>	35.1	44.9	45.7	0.8	1.8%	10.6	30.2%
<b>Admin, Support, Waste Mgt &amp; Remediation Services</b>	193.1	227.4	224.8	-2.6	-1.1%	31.7	16.4%
<b>Education &amp; Health Services</b>	395.6	423.9	431.9	8	1.9%	36.3	9.2%
<b>Educational Services</b>	51.9	59.3	60.2	0.9	1.5%	8.3	16.0%
<b>Health Care &amp; Social Assistance</b>	343.7	364.6	371.7	7.1	1.9%	28	8.1%
<b>Leisure &amp; Hospitality</b>	276.8	319.6	329.8	10.2	3.2%	53	19.1%
<b>Arts, Entertainment &amp; Recreation</b>	30.2	35.6	37.5	1.9	5.3%	7.3	24.2%
<b>Accommodation &amp; Food Services</b>	246.7	284.0	292.3	8.3	2.9%	45.6	18.5%
<b>Other Services</b>	104.2	111.0	113.9	2.9	2.6%	9.7	9.3%
<b>Government</b>	421.7	428.0	430.1	2.1	0.5%	8.4	2.0%
<b>Federal Government</b>	50.1	49.2	49.1	-0.1	-0.2%	-1	-2.0%
<b>State Government</b>	94.8	96.5	97.9	1.4	1.5%	3.1	3.3%
<b>Local Government</b>	276.8	282.3	283.2	0.9	0.3%	6.4	2.3%

Table 1 shows that total Tennessee nonfarm employment was 3 million, 10 thousand in 2017. The most rapidly growing industries during 2012-2017 were management of companies and enterprises, real estate rental and leasing, arts and entertainment, and recreation.

### **TENNESSEE INDUSTRY AND OCCUPATIONAL EMPLOYMENT PROJECTIONS, 2017-2019**

From a base of 3.2 million jobs in 2017, total employment for Tennessee, including agricultural, self-employed, and private household workers, is expected to grow to 3.3 million by 2019. Expected to increase by 1.8 percent annually, Tennessee's expanding economy is continuing steady growth across all industry sectors. Most of the employment growth will be in the service-providing industries with an annual growth rate of 2 percent and the addition of 103,940 jobs.

The service-providing sector is expected to grow more than two and a half times as rapidly as the goods-producing sector over this period, with all sectors showing positive growth. Specifically, the professional and business services and the financial activities sectors are expected to grow the most rapidly, with 3.6 and 3.2 percent annual growth rates, respectively. Professional and business services and education and health services together are expected to create the most new jobs (56,820), nearly 50 percent of the total. In the goods-producing sector healthy growth within construction (1.6 percent) and the creation of 3,970 new jobs through 2019 can only be considered positive indicators.

## Tennessee Major Industry Sector Employment, 2017-2019

Industry Sector Code	Title	2017 Employment (Thousands)	2019 Projected Employment (Thousands)	New Jobs Created (Thousands)	Annual Average Growth Rate (%)
000000	<b>Total All Industries</b>	3207.7	3326.3	118.6	1.8%
101000	<b>Goods Producing</b>	498.6	506.4	7.8	0.8%
101100	Natural Resources and	29.3	29.4	0.2	0.3%
101200	Construction	120.4	124.4	4.0	1.6%
101300	Manufacturing	349.0	352.6	3.7	0.5%
102000	<b>Service-Providing</b>	2532.1	2636.0	103.9	2.1%
102100	Trade, Transportation, and Utilities	630.1	644.2	14.0	1.1%
102200	Information	46.2	46.6	0.4	0.5%
102300	Financial Activities	148.4	158.3	9.8	3.3%
102400	Professional and Business Services	404.3	433.5	29.2	3.6%
102500	Education and Health	648.6	676.2	27.6	2.1%
102600	Leisure and Hospitality	335.0	349.7	14.8	2.2%
102700	Other Services (except Government)	133.6	137.4	3.8	1.4%
102800	Government	185.8	190.2	4.3	1.2%
102900	<b>Self Employed and Unpaid Family</b>	177.0	183.9	6.9	1.9%

### Fastest Growing Industries

The average annual growth rate for all industries for 2017-2019 is expected to be 1.8 percent, with service-providing industries growing almost three times as fast as the goods-producing industries.

The fewest number of new jobs expected over this two year period will be in natural resources

and mining (180) and information (430). With just one in eight new jobs being created in the goods-producing versus the service-providing sector, the long term shift from the goods-producing to the service sectors is clear.

The fastest growing detailed industries over this period not surprisingly align with the major service-providing industry sectors experiencing growth in Tennessee.

*Professional and Business Services:* Part of the reason for the rapid growth of this industry sector is the fast growth of several of its detailed industries, including the business services industries of accounting, tax preparation, bookkeeping, and payroll services (6.1 percent) and management, scientific, and technical consulting services (9.6 percent).

With the passage of the new federal tax law, it is likely that accounting and tax preparation services will continue robust growth. The most rapidly growing industry is facilities support services (12.9 percent), as a result of the booming construction industry and the outsourcing of building maintenance and management. Waste collection and

waste treatment have also seen rapid growth, as recycling is sustained and population and industry growth advance the production of hazardous and nonhazardous waste.

*Financial Activities:* Key industries in this fast-growing sector include insurance carriers, expected to add more than 2,000 jobs; automotive equipment rental and leasing, and securities and commodities brokers. The demand for financial services is likely to grow due to the aging population seeking retirement services as well as companies seeking investment banking services.

Insurance carriers' growth is happening through mergers and acquisitions as well as investments in technology as they expand their reach through digital services. Tennessee's population increased by 0.8 percent from 2015 to 2016. As tourism and population growth increase, particularly in Tennessee's urban areas, car and truck rental should advance as well.

*Leisure and Hospitality:* This is the third most rapidly-growing industry sector in Tennessee with a projected annual growth rate of 2.2 percent. One of the fastest-growing sectors is special food services, expected to create more than 1,000 new jobs over the two year period. This industry includes food service contractors, caterers, and mobile food services such as food trucks and custom home food delivery.

*Education and Health Care Services:* This industry sector expected to be the largest in 2019 contains two of the most rapidly-growing industries 6233, Continuing Care Retirement Communities and Assisted Living Facilities, and 6241, Individual and Family Services. Assisted living facilities could create more than 1500 new jobs during this period, as the population ages during a time of smaller families and somewhat increased the availability of long term care insurance.

The individual and family services industry could see more than 2800 new jobs created, with additional funding for youth services, drug treatment, and counseling, social assistance for the developmentally disabled, foster care and related services and a need for more support for families as the population increases. In 2012, Tennessee had the second highest opioid prescription rate in the nation after Alabama. Recent research reported in the 2018 Economic Report to the Governor demonstrated that prescription opioid use in Tennessee has had a significant effect in lowering the labor force participation rate, and policies to combat this will likely involve some expansion in the family services industry.

### Fastest Growing Industries with More Than 1,000 in Employment in 2017

Industry Title	2017 Employment	2019 employment	New Jobs Created	Annual Average Growth Rate (%)
Facilities Support Services	4,770	6,080	1,310	12.9
Automotive Equipment Rental and Management, Scientific, and Technical Consulting Services	6,820	8,190	1,380	9.6
Software Publishers	29,150	34,990	5,850	9.6
Waste Collection	2,930	3,400	470	7.7
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2,680	3,040	360	6.4
	22,390	25,180	2,790	6.1

Insurance Carriers	19,770	22,150	2,380	5.8
Electronic Shopping and Mail Order	5,580	6,240	660	5.8
Warehousing and Storage	34,010	37,990	3,980	5.7
Data Processing, Hosting, and Related Services	5,570	6,210	640	5.6
Waste Treatment and Disposal	2,080	2,320	240	5.5
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	1,020	1,130	110	5.4
Continuing Care Retirement Communities and Assisted Living	14,470	16,040	1,570	5.3
Commercial and Industrial Machinery and Equipment Rental and Leasing	2,710	3,000	290	5.1
Special Food Services	10,360	11,450	1,090	5.1
Individual and Family Services	26,640	29,440	2,800	5.1
Securities and Commodity Contracts Intermediation and Brokerage	5,590-	6,180	590	5.1
Other Support Services	10,030	11,080	1,050	5.1
Other Financial Investment Activities	4,300	4,750	450	5.1
Other Professional, Scientific, and Technical Services	12,740	14,070	1,330	5.1

The fastest growing industries included facilities support, automotive rental and leasing, management consulting services, software publishers, and waste collection.

*Other Rapidly Growing Industries:* Two industries in the information sector are expected to be in the top 20 in terms of industry growth: data processing, hosting, and related services (5.6 percent) and software publishers (7.7 percent), creating more than a thousand new jobs. Slow overall employment growth in the information sector is due to industries such as the publishing of books, newspapers, and related items and broadcasting, which are expected to decline during this period.

Two industries growing three times faster than average include electronic shopping and mail-order houses (5.8 percent) and warehousing and storage (5.7 percent). Warehousing and storage are expected to create the second-highest number of new jobs by 2019 (nearly 4,000). The rapid development of this industry contrasts with the slower projected growth of retail trade in general (0.8 percent).

*Goods Producing Sectors:* Among the goods-producing sectors, the Construction sector is expected to be the most rapidly growing at 1.6 percent. Buoyed by low interest rates, the fastest growing detailed industries will be in residential building construction (2361), including single and multifamily and home remodelers. Other fast-growing sectors include building equipment contractors (2382) including electricians, plumbing and air conditioning, and site preparation and other construction installers (2389). Related industries such as lumber and construction wholesalers (NAICS 4233) and activities related to real estate (NAICS 5313) are expanding as well.

Manufacturing is expected to be the fourth largest employment sector in Tennessee, comprising 352,610 jobs in 2019 and with average weekly wages of \$1,084 in the third quarter of 2017.

Despite national trends showing manufacturing declining, a least five manufacturing-related industries, including dairy products (NAICS 3115), other nonmetallic mineral products (NAICS 3279), motor vehicle parts (NAICS 3363), and motor vehicle manufacturing (NAICS 3361) are expected to grow faster than two percent and cause

total manufacturing employment to move in a positive direction. Other rapidly-growing industries include metal manufacturing (3324), electro-medical and measuring instruments (3345) and cement and concrete manufacturing (3273).

## **OCCUPATIONAL AND WAGE GROWTH**

Computer and Mathematical occupations with an annual growth rate of 3.3 percent are the fastest growing occupational group. Employment is expected to top 57,610 in the state by 2019, creating annual total openings of more than 5,400 and paying the third highest median wages (\$70, 140) of the 22 occupational groups.

The largest occupation is computer user support specialists (10,050 employment in 2017), followed by computer systems analysts. The fastest growing mathematical occupations with more than 30 in employment in 2017 are statisticians (8.3 percent annually), actuaries (5.2) and operations research analysts (5.0). Among the computer occupations, the fastest growing is software developers, applications (5.0) and information security analysts (4.8).

Business and Financial Operation occupations, with the fifth highest median wage (\$58,050) are expected to increase employment by 2.9 percent annually. Among the fastest-growing occupations are tax preparers (6.2 percent annually); insurance appraisers, auto damage (5.8 percent), and personal financial advisors (4.8). Among those with the largest number of openings are accountants and auditors, with more than 2,420 openings per year, and human resource specialists, with more than 1,270 openings; both of these require bachelor's degrees.

In support of these occupations is Office and Administrative occupations, having the largest number of annual openings expected (63,080). Two prominent occupations in this group are customer service representatives (9,210 annual openings) and stock clerks and order fillers (7,660 annual openings), usually requiring a high school diploma or the equivalent.

Healthcare Support occupations, the third most rapidly growing group (2.5 percent annually) has projected annual openings of 11, 220. The median wage of \$26,430 is the sixth lowest among the occupational groups. The largest occupations in this group are nursing assistants, with projected employment of 32,870 in 2019 and 4,160 openings, and medical assistants, with projected employment of 15,690 and expected 2,030 openings. The most rapidly growing occupations are veterinary assistants and laboratory animal caretakers (6.1 percent annually) and home health aides (4.9 percent).

Management occupations' employment is projected to increase by 2.4 percent annually. Not surprisingly, this occupational category has the highest annual wage (\$81,140) of the 22 occupational groups. The fastest growing occupations include financial managers (3.6 percent annually), training and development managers (3.5 percent) and emergency management directors (3.1 percent), important in planning for natural disaster and crisis management. Other large management occupations include general and operations managers; farmers, ranchers, and other agricultural managers, and food service managers (2,010 openings per year).

Community and Social Service occupations are also expected to increase by 2.4 percent annually and expected to have more than 6600 openings each year. However, median wages are in the middle range, at \$39,580, but still above the state median of \$33,860. Fast-growing occupations include marriage and family therapists (4.4 percent annually), community health workers (3.8 percent), and substance abuse and behavioral disorder counselors (3.6 percent). Reducing the opioid crisis will likely cause growth in these areas to continue. Some of the largest occupations include clergy, directors of religious activities; and child, family, and school social workers (660 openings expected annually).

Other Major Occupational Groups with large numbers of annual openings include food preparation and serving related occupations (54, 440 annual openings), sales and related occupations (46,760), transportation and material moving occupations (41,070), and production occupations (34,200 openings, the fifth largest group). In production, among the fastest growing occupations are medical appliance technicians (5.3 percent), computer numerically controlled machine tool programmers (2.4 percent), and painters, transportation equipment (3.2 percent). The

largest occupational categories are assemblers and fabricators (80,610 projected employment) and metal and plastic workers (50,430 projected).

Healthcare practitioners have the tenth largest number of openings (14,830) and the seventh highest per capita average wage (\$55,020). The occupations in this group with the most openings include registered nurses, licensed practical nurses, pharmacy technicians, medical and laboratory technicians, and nurse practitioners. Among the higher paying occupational groups are legal occupations with a median annual wage of \$70,870 (second highest) and architecture and engineering occupations paying on average \$68,380.

## **EMERGING GROWTH SECTORS**

The Solar Jobs Census of 2017 named Tennessee 14th in the U.S. for solar jobs, with an estimated 4411 jobs in 2017. They reported an estimated 2100 jobs in installation; 1500 in manufacturing; 270 in sales and distribution; 380 in project development; and 110 in other areas. The industries in which solar workers are employed are not easily identified in the current North American Industry Classification System (NAICS), so it is difficult to review these results. As the NAICS is updated in future years to better identify solar industries, more information should be available.

A recent study by the Tennessee Department of Economic and Community Development (January 2018) on the cluster of Healthcare and Medical Devices industries in Tennessee reported employment of more than 26,600 Tennesseans and projected employment of 28,000 by 2022<sup>iv</sup>. These industries alone are estimated to employ more than 1500 team assemblers and 700 medical appliance technicians, as well as more than 1200 engineers and industrial engineering technicians. The medical apparatus manufacturing industry is included in NAICS code 3345, expected to increase by 4.3 percent from 2017 to 2019; also faster growing are scientific research and development services (5417) at 1.2 percent and architectural, engineering, and related services, which include testing laboratories, at 1.5 percent.

## **B. WORKFORCE ANALYSIS**

The Unified or Combined State Plan must include an analysis of the current workforce, including individuals with barriers to employment, as defined in section 3 of WIOA.\* This population must include individuals with disabilities among other groups\*\* in the State and across regions identified by the State. This includes: Individuals with barriers to employment include displaced homemakers; low-income individuals; Indians, Alaska Natives, and Native Hawaiians; individuals with disabilities, including youth who are individuals with disabilities; older individuals; ex-offenders; homeless individuals, or homeless children and youths; youth who are in or have aged out of the foster care system; individuals who are English language learners, individuals who have low levels of literacy, and individuals facing substantial cultural barriers; farmworkers (as defined at section 167(i) of WIOA and Training and Employment Guidance Letter No. 35-14); individuals within 2 years of exhausting lifetime eligibility under the Temporary Assistance for Needy Families program; single parents (including single pregnant women); and long-term unemployed individuals. \*\* Veterans, unemployed workers, and youth, and others that the State may identify.

### **Employment and Unemployment**

Provide an analysis of current employment and unemployment data, including labor force participation rates, and trends in the State.

### **Labor Market Trends**

Provide an analysis of key labor market trends, including across existing industries and occupations.

### **Education and Skill Levels of the Workforce**

Provide an analysis of the educational and skill levels of the workforce.

## Skill Gaps

Describe apparent ‘skill gaps’.

### **EMPLOYMENT AND UNEMPLOYMENT**

All regions had significant reductions in their unemployment rates over the year. In 2016, the Middle Region had the largest labor force, at 1.3 million, an average of just over 55,000 unemployed for the year, and an unemployment rate of 4.2 percent. The unemployment rate decreased from 4.9 percent in 2015. The East, although having a smaller labor force of 1.1 million, had a higher annual average unemployment rate of 5.0 percent, so the number of unemployed was just over 55,000 as well. In 2015, the unemployment rate had been higher at 5.7 percent. The West Region had the highest annual average unemployment rate, 5.7 percent, but with a smaller labor force of 0.7 million, the average number of unemployed was just over 40,000. The rate declined from 6.7 percent in 2015.

Along with the highest average unemployment rate, in 2015 the West also had the highest poverty rate of the region, at 20.7 percent (decreasing from 2014). The East had a rate of 18.0 percent (slightly increased from 2014). The Middle had the lowest rate at 15.4 percent, decreasing from 2014.

### **EDUCATIONAL ATTAINMENT**

Comparing census data on the educational attainment of the population within the East, Middle, and West Regions to the average for Tennessee: For the population, 25 years and older, in 2015 percent of state residents were high school graduates or had higher degrees. The rates for all regions were fairly similar, with the Middle Region about a percentage point higher at 86.7, having increased over the year. The East Region had the lowest percentage of individuals with bachelor’s degrees or greater, at 22.4 percent, followed by the West at 24.6 percent and the Middle at 27.6 percent, all regions have increased over the year.

### **POVERTY RATES BY COUNTY AND REGION**

Poverty rates vary by region, within regions, and within counties. The latest data on poverty rates are for 2015. All regions had poverty rates of 15 percent or greater, with the West Region having the highest rate at 20.7 percent; the East at 18.0 percent; and the Middle at 15.4 percent. The poverty rates for both West and Middle decreased, with that of the East increasing slightly. Poverty rates tend to be greater in the core urban counties and rural areas in Middle Tennessee as well as in the other regions.

### **DISABILITY STATUS**

For the state in 2015, 193,990 individuals were identified with a disability in a labor force of 2,962,822. This is 6.5 percent. Those with a disability made up 13.8 percent of the unemployed. Of those not in the labor force, approximately 34 percent of individuals had a disability, demonstrating it can be a significant barrier to employment. The highest regional percentage of those not in the labor force and having a disability was in East Tennessee with 38.7 percent.

### **YOUTH UNEMPLOYMENT**

High youth unemployment (ages 16 to 24) continues to be the challenge across the regions. The latest data is available for 2015. With an average state unemployment rate in 2015 of 5.6 percent, youth unemployment was from three to four times greater, with the highest rates in West, East, and Middle Tennessee, respectively. In West Tennessee, nearly one in four youth in the Region in the labor force was unemployed.

### **CHALLENGES: SUBSTANTIAL BARRIERS TO EMPLOYMENT**

WIOA included a renewed focus on those with substantial barriers to employment (SBEs), with categories specifically defined in the WIOA guidelines. Estimates of the number of these individuals by Local Workforce Development Areas (LWDAs) in Tennessee were produced from a number of sources, including the following:

- U.S. Census Bureau
- U.S. Department of Labor, Bureau of Labor Statistics (BLS)
- Tennessee Department of Correction
- Tennessee Department of Human Services
- Tennessee Department of Children’s Services

Several of these departments have different service areas than the LWDA, so population-based estimates were created by the Department of Labor and Workforce Development, LMI Section. These estimates are displayed below. Individuals with barriers to employment by LWDA in the following categories are included:

- Column B: Low-income individuals - number of people in poverty
- Column C: Low-income individuals- persons earning less than 70% of Lower Living Standard Income Level (LLSIL), ages 16 to 64
- Column D: Native Americans
- Column E: Individuals with disabilities- ages 18 to 64
- Column F: Older individuals- more than 55 years old
- Column G: Those in households where English is not spoken well, or not at all
- Column H: Justice-involved individuals (on parole, 6-30-2016)
- Column I: Justice-involved individuals (on probation, 6-30-2016)
- Column J: Justice-involved individuals (delinquent youth in care, 5-3-2017)
- Column K: Foster care services (dependent, neglected youth, 5-3-2017)
- Column L: Foster care services-youth aged out
- Column M: Single parents
- Column N: Temporary Assistance for Needy Families (TANF) case closures in FFY 2016
- Column O: Estimated numbers of homeless persons

Some measures are more reliable than others. Homeless censuses are done infrequently, and may not capture many who are not living on the streets but nonetheless do not have permanent housing. The largest groups include low-income, older individuals, and those with disabilities. As integrated databases are developed, determining individuals who have two or more barriers would assist in prioritizing services.

### Substantial Barriers to Employment

New LWDA Area	Number Of American Indians or Alaskan Natives alone	Population Ages 14 17	Population Ages 18 24	Population Ages 55+	Number Below Poverty	Number With Disability	Number of Single Parent Families
East							
East Tennessee	2,554	60,418	115,555	370,968	117,665	108,067	36,565
Northeast Tennessee	927	24,111	45,554	169,237	53,514	56,240	16,332

Southeast Tennessee	940	31,855	59,040	193,051	59,124	57,298	20,889
Middle Tennessee							
Northern Middle Tennessee	4,217	100,176	184,639	431,975	136,440	123,061	64,777
Southern Middle Tennessee	1,021	23,669	35,753	130,826	38,318	41,303	15,256
Upper Cumberland	578	17,232	31,558	114,366	38,518	34,757	11,213
West Tennessee							
Greater Memphis	1,741	59,408	105,887	260,918	109,880	77,019	52,358
Northwest Tennessee	553	13,076	23,496	79,908	26,210	25,172	9,370
Southwest Tennessee	254	13,041	24,262	76,476	27,103	22,656	9,498
Total	12,785	342,986	625,744	1,827,725	606,772	545,573	236,258

**Sources:** U.S. Census, American Community Survey, 2016.

\* Counties of commitment, not residence.

## **WORKFORCE CHALLENGES AND STRATEGIES 2018**

The Workforce Innovation and Opportunity Act (WIOA) was in full implementation stage after July 1, 2017. The integration of workforce services with collaborative partners and shared goals continues to evolve.

An additional challenge in August 2018 was the restructuring of the local workforce development areas from 13 to 9, with full implementation in the fall and winter of 2018. To facilitate this implementation, data on the potential population to serve was needed for each of the nine areas

### **CHALLENGES: SUBSTANTIAL BARRIERS TO EMPLOYMENT**

WIOA included a renewed focus on those with substantial barriers to employment (SBEs), with categories specifically defined in the WIOA guidelines.

#### WIOA Individuals with Barriers to Employment, 2018 Categories

- Displaced homemakers
- Low-income individuals
- Native Americans
- Individuals with disabilities, including recipients of Social Security
- Older individuals
- Justice- involved individuals
- People experiencing homelessness
- Youth who are in or have aged out of the foster care system
- Individuals who:
  - Are English language learners
  - Have low levels of literacy
  - Face substantial cultural barriers
- Eligible migrant and seasonable farmworkers

- Individuals within two years of exhausting lifetime Temporary Assistance for Needy Families (TANF) eligibility
- Single parents, including pregnant women
- Those unemployed for 27 or more consecutive weeks
- Such other groups as determined by Governor Haslam

Collection of data on current populations in these categories is ongoing for Workforce Services and WIR<sup>2</sup>ED. Estimates of the number of these individuals by the revised Local Workforce Development Areas (LWDAs) in Tennessee were produced from a number of sources, including the following:

- U.S. Census Bureau
- U.S. Department of Labor, Bureau of Labor Statistics (BLS)
- Tennessee Department of Correction
- Tennessee Department of Children’s Services
- Tennessee Department of Education
- Tennessee Department of Human Services
- Tennessee Department of Mental Health and Substance Abuse Services

Several of these departments have different service areas than the LWDAs, so population-based estimates were created by the Department of Labor and Workforce Development, WIR<sup>2</sup>ED Division. Available in this report are data by LWDA for the following categories:

- Low income individuals
- Native Americans
- Individuals with disabilities
- Older individuals
- Justice-involved individuals, including those on probation or parole and in mental health and recovery courts
- Youth aged out of foster care
- Individuals with limited English-speaking ability
- Single parents
- In-School youth experiencing homelessness
- Individuals within 18 months of exhausting lifetime TANF eligibility

These estimates are displayed in Table 30-32. Additional diversion programs and processes are being developed, including the Davidson County District Attorney’s statement on September 5, 2018 that he would stop immediately prosecuting many drivers’ license violations, which is expected to divert 12,000 charges out of Nashville courtrooms during the next year. The largest groups with substantial barriers to employment include older individuals, those below the poverty threshold, and those with disabilities. As integrated databases are developed, determining individuals who have two or more barriers would assist in prioritizing services.

### Substantial Barriers to Employment

New LWDA Area	Number Of American Indians or Alaskan Natives alone	Population Ages 14 17	Population Ages 18 24	Population Ages 55+	Number Below Poverty	Number With Disability	Number of Single Parent Families
East							
East Tennessee	2,554	60,418	115,555	370,968	117,665	108,067	36,565

Northeast Tennessee	927	24,111	45,554	169,237	53,514	56,240	16,332
Southeast Tennessee	940	31,855	59,040	193,051	59,124	57,298	20,889
Middle							
Northern Middle Tennessee	4,217	100,176	184,639	431,975	136,440	123,061	64,777
Southern Middle Tennessee	1,021	23,669	35,753	130,826	38,318	41,303	15,256
Upper Cumberland	578	17,232	31,558	114,366	38,518	34,757	11,213
West							
Greater Memphis	1,741	59,408	105,887	260,918	109,880	77,019	52,358
Northwest Tennessee	553	13,076	23,496	79,908	26,210	25,172	9,370
Southwest Tennessee	254	13,041	24,262	76,476	27,103	22,656	9,498
Total	12,785	342,986	625,744	1,827,725	606,772	545,573	236,258

Source: U.S. Census, American Community Survey, 2016.

### Substantial Barriers to Employment

New ECD Regions	Probationers and Parolees	Statistics (FY 2018)	Mental Health Court Sta English Speaking	Limited Youth Aged Out	*Foster Care Services Recovery Courts	Clients In lessness in 2017	Youth Experienc ing Home ing Eligibili ty Total	In School TANF 18 Months From End
East								
East Tennessee	10,692			5,431	202	288	1983	
Northeast Tennessee	4,620		13	754	62	70	1350	
Southeast Tennessee	5,472			3,156	80	51	961	
Middle								
Northern Middle Tennessee	17,697		38	16,498	210	525	4938	
Southern Middle Tennessee	4,198		28	1,789	90	81	307	
Upper Cumberland	3,793			1,454	91	181	1056	
West								
Greater Memphis	10,509		34	6,987	133	398	891	
Northwest Tennessee	2,224			577	41	101	305	
Southwest Tennessee	2,243			470	26	33	542	
Total	61,448		113	37,116	935	1728	12333	

\* Counties of commitment, not residence.

Those Unemployed for 27 or More Consecutive Weeks

Group Identified	Number of Workers Reported
All Races	21,325
White	16,400
Black	4,200
Hispanic	1,100
Age 16-19	1,433
Age 20+	20,275
Male, 16+	11,100
Female, 16+	10,250

Sources: Probationers and parolees: Adam Dawson, Community Supervision Division, TN Department of Correction. Mental Health Court and Recovery Court Statistics: Liz Ledbetter, Recovery Court Administrator, TN Department of Mental Health and Substance Abuse Services. Limited English Speaking: U.S. Census Bureau, American Community Survey, 2016. Foster Care Services: Dave Aguzzi, Office of Independent Living, TN Department of Children's Services, In School Youth Experiencing Homelessness: Hebeh Hindieh, Data Management Division, TN Department of Education TANF 18 Months from Ending Eligibility: Lakecia Peterson, Division of Family Assistance and Child Support, TN Department of Human Services.

Endnotes

v Tamburin, A. (2018, September 5). DA to keep 12,000 cases out of court. Tennessean, pp.1A-14A

**SKILLS GAPS**

**CRITICAL SKILLS**

The assignment of skills and importance rankings to occupations are based on scientifically-designed employer surveys by occupational analysts in the Employment and Training Administration at the U.S. Department of Labor. When occupations are growing, the skills in those occupations will be ranked more highly.

The five most critical skills required across all occupations based on the estimated employment increases through 2019 include speaking, active listening, reading comprehension, social perceptiveness, and critical thinking. With the growth in the service industry, especially in leisure and hospitality, food service, and customer service occupations, service orientation has grown in importance.

**MIDDLE SKILL OCCUPATIONS IN DEMAND**

The following table lists a variety of middle skill occupations in demand in Tennessee. Using the Tennessee Department of Labor and Workforce's newly completed statewide occupational projections for 2016-2026; an initial list was developed by identifying occupations within 16 broad educational clusters and nearly 200 detailed programs of study within those clusters that were expected to be growing through the year 2026 at least as fast as the average for all occupations. Middle skill includes occupations with the usual job entry requirement of a high school diploma but less than a bachelor's degree. To be included in the list, the jobs had to have a median annual wage in 2017 of at least \$29,393, which is the equivalent of \$14.13 an hour for a 40 hour week year-round.

Each of the occupations was in programs of study that had more job market openings expected in the long run each year than the number of newly trained individuals entering the job market<sup>1</sup>. One addition- a measure is included to describe the short term labor market conditions for these occupations. On or around September 13-14, 2018, the state's jobs4tn.gov website was queried as to the current number of job openings for these jobs compared to the number of candidates with active resumes registered on the system. That ratio of candidates to job openings appears in column B in the following table. For example, for transportation inspectors, in the short term, there were currently more than five candidates seeking jobs on the system than jobs posted.

If more candidates were needed to fill job openings, then the number will be less than one. For example, at present, the ratio for physical therapist assistants is 0.70; this means there will only .7, or less than one candidate on the system to fill each of the currently advertised jobs.

The largest categories of jobs include 17 in health science, seven in architecture and construction, and five each in agriculture, food, and natural resources; manufacturing; science, technology, engineering, and math (STEM), and transportation.

Further information on job requirements can be found on jobs4tn.gov in the Occupational Profile section. Jobs excluded from the list included those which required a bachelor's degree or more, had no current openings on jobs4tn.gov, had annual wages less than \$29,393 or were not expected to be in demand in the long term.

The number of average annual openings by occupation projected from 2016 to 2026 is in most cases considerably larger than previous estimates of annual average openings for these occupations. This is due to the newly-developed separations methodology by the U.S. Department of Labor, Bureau of Labor Statistics. It includes greater numbers of annual job openings due to individuals transferring out of occupations earlier in their careers.

## Middle Skill Occupations

	2017 Average Annual Open ings	Occupation Candidate/ Jobs Ratio (9 14 2018)	2017 Median Annual Wage	TN DOE Industry Certifica tions
Agriculture, Food, and Natural Resources				
Biological Technicians	195	2.70	\$39,080	
First Line Supervisors of Lawn and Garden Workers	2,645	1.27	\$41,420	
Pesticide Handlers	2,615	0.07	\$32,160	C
Pump Operators, Except Wellhead	180	0.33	\$39,280	
Veterinary Technologists and Technicians	1,640	0.48	\$31,130	C
Architecture and Construction				
Cement Masons and Concrete Finishers	750	1.71	\$36,360	
Civil Engineering Technicians	1,070	2.63	\$30,830	
Construction Carpenters	1,040	2.82	\$30,600	C
Electricians	2,890	0.72	\$46,500	C
Heating and Air Conditioning Mechanics	1,080	0.38	\$42,160	C
Operating Engineers and Other Construction Equipment				
Plumbers and Pipefitters	1,215	0.12	\$46,920	C
Arts and Communications				
Printing Press Operators	1,140	1.33	\$34,770	
Business Management and Administration				

Customer Service Representatives	23,310	1.63	\$30,720	
First Line Supervisors of Office and Administrative Support Workers				
Payroll and Timekeeping Clerks	690	1.00	\$41,640	
Government and Public Administration				
Eligibility Interviewers, Government Programs	295	6.70	\$36,740	
Transportation Inspectors	580	5.50	\$74,580	
Health Science				
Cardiovascular Technologists and Technicians	75	0.06	\$41,950	C
Chiropractors	25	0.80	\$89,630	
Dental Assistants	820	0.78	\$36,380	
Diagnostic Medical Sonographers	155	0.09	\$62,210	
Massage Therapists	190	0.16	\$41,080	
Medical and Clinical Lab Technicians	620	1.04	n/a	
Medical Assistants	2,720	1.17	\$30,340	C
Medical Records Technologists	480	1.51	\$38,610	
Nuclear Medicine Technologists	45	0.06	\$65,530	
Occupational Safety and Health Technicians	190	1.88	\$48,290	
Occupational Therapist Assistants	160	0.12	\$61,190	
Opticians, Dispensing	160	2.14	\$36,920	

Pharmacy Technicians	1,275	0.48	\$29,880	C
Physical Therapist Assistants	475	0.70	\$58,080	
Practical Nurse	2,245	0.23	\$38,060	
Radiologic Technologists	430	0.17	\$50,020	
Respiratory Therapists	295	0.45	\$50,010	
Hospitality and Tourism				
Fitness Trainers and Aerobics Instructors	2,915	0.24	\$39,190	C
Lodging Managers	1,870	0.44	\$42,830	
Human Services				
Morticians, Undertakers, Funeral Directors	405	0.75	\$46,200	
Social and Human Services Assistants	3,795	1.78	\$32,140	C
Information Technology				
Computer Network Support Specialists	1,220	7.17	\$55,280	C
Public Safety, Corrections, and Security				
Correctional Officers	855	4.10	\$31,970	
Firefighters (Municipal)	585	8.00	\$38,460	
Paralegals and Legal Assistants	625	1.71	\$46,730	
Manufacturing				
Cost Estimators	200	0.48	\$59,010	
Dental Laboratory Technicians	65	4.50	\$33,020	
Machinist	860	0.89	\$40,460	C
Maintenance and Repair Workers, General	9,125	2.17	\$36,460	
Team Assemblers	14,325	7.14	n/a	
Telecommunications Installers and Repairers	1,220	3.05	\$46,460	
Sales				
Production, Planning, Expediting Clerks	2,265	0.63	\$44,350	

Sales Representatives, Wholesale and Manufacturing, Except Technical	14,025	3.32	\$50,630	
Science, Technology, Engineering, and Math				
Chemical Technicians	160	5.00	\$46,290	
Environmental Science and Protection Technicians	275	1.82	\$45,300	
Mechanical Engineering Technicians	130	1.05	\$52,100	C
Nuclear Technicians	30	5.50	\$76,970	
Surveying and Mapping Technicians	285	0.60	\$42,660	
Transportation				
Automotive Service Technicians	2,160	2.55	\$38,180	C
Commercial Pilots	205	0.24	\$70,080	
Heavy and Tractor-Trailer Truck Drivers	8,810	0.25	\$39,640	
Mobile Heavy Equipment Mechanics	380	0.21	\$44,420	
Outdoor Power Equipment Mechanics	235	0.50	\$30,040	

Sources: TN Dept. of Labor and Workforce Development, LMI Section, 2016-26 Employment Projections and 2017 OES Wages; Jobs4tn.gov Candidate/Supply Ratios; TN Dept. of Education, Career and Technical Education Div.

### Tennessee Skills Gaps Due to Lack of High School Graduation and Employer Demand

The table below shows the number of individuals in Tennessee considered by the Adult Education Division with the potential to be served. This information is based on the American Community Survey 2016 5 year estimate of Census data; it includes all individuals aged 18 to 64 in Tennessee without a high school diploma. A total of 473,700 individuals in this age range without a high school diploma, with at least 19,000 in each LWDA, shows a considerable literacy skill gap in Tennessee. With a total population of 6,651,194, the total potentially to be served was 7.1 percent of Tennessee's population in 2016.

#### LWDA

#### Sum of 18-64 Potential to Serve

LWDA 1	25,819
LWDA 2	39,299
LWDA 3	23,224
LWDA 4	38,472
LWDA 5	50,023
LWDA 6	20,852
LWDA 7	20,229
LWDA 8	39,034
LWDA 9	74,576
LWDA10	20,616
LWDA11	19,940
LWDA12	28,117
LWDA13	73,499
<b>Total</b>	<b>473,700</b>



Occupation Title	Educ Level	TN	TN Jobs Posted Q4 2017	LWDA 1	LWDA 2	LWDA 3	LWDA 4	LWDA 5	LWDA 6	LWDA 7	LWDA 8	LWDA 9	LWDA 10
<b>Healthcare Practitioners and Technical Occupations</b>	--	--	624	720	345	880	440	955	200	250	740	2,275	195
Pharmacy Technicians	HS	420	669	25	25	25	--	--	--	--	40	105	--
Licensed Practical and Licensed Vocational Nurses	PS	1,205	2,454	--	70	85	--	115	--	--	--	260	--
Medical Records and Health Information Technicians	PS	225	481	25	--	50	--	25	--	--	20	100	--
Opticians, Dispensing	HS	50	13	--	--	--	--	--	--	--	--	25	--
<b>Protective Service Occupations</b>	--	--	--	130	100	165	110	160	55	40	180	610	75
First-Line Supervisors of Fire Fighting and Prevention Workers	PS	75	42	--	--	--	--	15	--	--	15	15	--
Firefighters	PS	185	12	--	--	20	--	15	--	--	20	30	--
<b>Sales and Related Occupations</b>	--	--	--	660	760	1,085	775	1,110	280	285	1,650	3,020	345
Advertising Sales Agents	HS	60	191	--	--	--	--	--	--	--	--	55	--
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	HS	305	212	35	30	65	40	60	--	15	110	240	15
Real Estate Sales Agents	HS	50	70*	--	--	--	--	--	--	--	--	35	--
<b>Office and Administrative Support Occupations</b>	--	--	--	885	680	1,540	855	1,555	360	355	2,010	4,105	375
Bookkeeping, Accounting, and Auditing Clerks	HS	910	1,507	40	25	60	30	50	10	10	70	150	10
Payroll and Timekeeping Clerks	HS	195	269	--	--	--	--	--	--	--	20	30	--
Production, Planning, and Expediting Clerks	HS	285	399	15	--	20	30	25	--	--	35	85	--
Medical Secretaries	HS	315	314*	15	--	15	--	35	--	--	--	40	--
<b>Construction and Extraction Occupations</b>	--	--	--	215	155	215	240	265	75	95	455	660	65
Paving, Surfacing, and Tamping Equipment	HS	40	14	--	--	--	--	--	--	--	15	--	--
Operating Engineers and Other Construction Equipment Operators	HS	150	245	--	--	--	--	15	--	--	25	15	--
Electricians	HS	400	330	25	--	45	30	30	--	--	25	85	--
Plumbers, Pipefitters, and Steamfitters	HS	175	375	15	--	--	--	15	--	--	20	55	--
Sheet Metal Workers	HS	95	57	--	--	--	--	20	--	--	--	25	--

Occupation Title	Educ Level	TN	TN Jobs Posted Q4 2017	LWDA 1	LWDA 2	LWDA 3	LWDA 4	LWDA 5	LWDA 6	LWDA 7	LWDA 8	LWDA 9	LWDA 10
Construction and Building Inspectors	HS	55	106	--	--	--	--	--	--	--	--	20	--
Installation, Maintenance, and Repair Occupations	--	--	69	240	270	395	315	435	145	110	460	1,105	125
Telecommunications Equipment Installers and Repairers	PS	155	83	--	--	--	--	--	--	--	30	25	--
Security and Fire Alarm Systems Installers	HS	55	106	--	--	--	--	--	--	--	15	20	--
Home Appliance Repairers	HS	35	100*	--	--	--	--	--	--	--	25	--	--
Industrial Machinery Mechanics	HS	320	97	--	15	15	20	50	--	--	--	100	--
Maintenance Workers, Machinery	HS	85	295	--	--	--	30	15	--	--	--	20	--
Millwrights	HS	30	28	--	--	--	--	--	--	--	--	--	--
Electrical Power-Line Installers and Repairers	HS	155	63	--	--	15	15	20	--	--	20	50	--
Telecommunications Line Installers and Repairers	HS	60	48	--	--	--	--	--	--	--	--	--	--
Medical Equipment Repairers	AA/AS	65	61	--	--	--	--	--	--	--	--	20	--
Maintenance and Repair Workers, General	HS	925	984	60	85	85	80	125	--	35	120	235	--
Locksmiths and Safe Repairers	HS	25	3	--	20	--	--	--	--	--	--	--	--
Production Occupations	--	--	1,470*	395	635	330	795	1030	490	285	845	1,790	435
First-Line Supervisors of Production	PS	325	1,382	15	20	15	30	50	20	15	45	80	15
Structural Metal Fabricators and Fitters	HS	95	26	--	--	--	--	--	--	--	15	15	--
Team Assemblers	HS	1,845	206*	85	140	20	310	315	230	95	265	610	80
Computer-Controlled Machine Tool Operators, Metal and	HS	170	110	--	15	--	--	--	--	--	30	15	--
Machinists	HS	345	227	--	40	--	55	35	25	15	15	20	15
Inspectors, Testers, Sorters, Samplers, and Weighers	HS	405	631*	20	30	20	30	45	--	25	50	110	--
Transportation and Material Moving Occupations	--	--	--	375	405	790	435	1230	330	210	815	2,995	210
Heavy and Tractor- Trailer Truck Drivers	PS	1,660	6,641	70	95	160	115	175	50	40	85	465	45

Middle Skill Occupations in Demand Table Legend: Educ Level: Usual required education level. HS=High school diploma or equivalent; AA/AS = Associate's degree; PS=Postsecondary non-degree award; SC=Some college, no degree.

\*Reported wage data below \$28,454 or no wage data reported. Source: Tennessee Department of Labor and Workforce Development, LMI Section, LWDA Employment Projections.

Some of the industry credentials associated with middle-skill demand occupations include:

- **Computer Support Specialists:** CCNA Cisco Certified Network Associate, CompTIA+, CompTIA IT Fundamentals, Microsoft Office Expert (Excel and Word), Microsoft Office Specialist (Word), Microsoft Technology Associate Software Development Fundamental
- **Pharmacy Technicians:** Certified Pharmacy Technician
- **Fire Fighters and Fire Fighter Supervisors:** Emergency Medical Responder (First Responder)
- **Bookkeeping and Auditing Clerks and Payroll and Timekeeping Clerks:** Microsoft Office Expert (Excel)
- **Electricians:** NCCER Electrical Level One, OSHA 30
- **Plumbers:** NCCER Plumbing Level One, OSHA 10
- **Construction and Building Inspectors:** NCCER Construction Technology, NCCER Core Curriculum, OSHA 10 and 30
- **Machinists:** Machining Level I- Measurement, Materials, and Safety Certification (NIMS), Certified Production Technician (CPT)
- **Industrial Machinery Mechanics:** FANUC

Other related certifications include the **Commercial Driver License (CDL)** for tractor-trailer truck drivers and certificates and associate degrees for **Health Information Technicians**. Detailed information on licensing requirements is available on [jobs4tn.gov](http://jobs4tn.gov). The state can reduce skill gaps by training more individuals in these demand areas and working to increase the number of individuals who obtain these certifications.

## **2. WORKFORCE DEVELOPMENT, EDUCATION AND TRAINING ACTIVITIES ANALYSIS**

The Unified or Combined State Plan must include an analysis of the workforce development activities, including education and training in the State, to address the education and skill needs of the workforce, as identified in *Education and Skill Levels of the Workforce* above, and the employment needs of employers, as identified in *Employers' Employment Needs* above. This must include an analysis of –

### **A. THE STATE'S WORKFORCE DEVELOPMENT ACTIVITIES**

Provide an analysis of the State's workforce development activities, including education and training activities of the core programs, Combined State Plan partner programs included in this plan, and required and optional one-stop delivery system partners.\*

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\* Required one-stop partners: In addition to the core programs, the following partner programs are required to provide access through the one-stops: Career and Technical Education (Perkins), Community Services Block Grant, Indian and Native American programs, HUD Employment and Training programs, Job Corps, Local Veterans' Employment Representatives and Disabled Veterans' Outreach Program, National Farmworker Jobs program, Senior Community Service Employment program, Temporary Assistance for Needy Families (TANF) (unless the Governor determines TANF will not be a required partner), Trade Adjustment Assistance programs, Unemployment Compensation programs, and YouthBuild.

In achieving the Governor's Drive to 55 goal, all training activities and education practices are working to prioritize efficiency in creating connections across a wide spectrum. From Read to be Ready, to Tennessee Promise, Tennessee LEAP, and Tennessee ReConnect, the core programs and partners are actively identifying numerous ways of leveraging their assets and building capacity in a more integrated manner. The work being done by the local boards to navigate and connect the numerous citizens accessing our systems each day further provides thousands of opportunities to engage at numerous levels. Tennessee Workforce System is collaborating with Tennessee Higher Education Commission to provide ambassadors throughout the state that advocate for participants reconnecting to post-secondary educational programs. The assistance they provide guides Participants needing direction with FASFA, student loan information, and more to ease the process of returning to school.

While Tennessee has a record of high achievement in so many areas, the role the core programs and agencies play will drive a business model that will increase skill development and educational attainment. The encouraging business climate continues to put pressure on skill demand, and the connectivity of the core programs is key to ensuring efficient connections. Tennessee has been diligently engaged to build on the Governor's launch of Jobs4TN.gov to add modules and components and move to a real-time system of data collection that identifies trends and quickly respond to the customers being served. The Tennessee Workforce System is well served to encourage both job seekers and business to utilize this system and tools. This trend has been strong over the last several years as more and more customers use technology and Tennessee is well positioned through its platform to quickly identify, respond and enhance the customer's experience using technology. The many that benefit through this medium are demonstrating an increased and enhanced value for the Tennessee Workforce System as many benefits through these connections.

The realization that bricks and mortar locations are largely unsustainable and costly, core programs and partners have to think digitally to build capacity and this model is strongly evident and a foundation is there. Additional work around the longitudinal P-20 system further connects and builds a foundation that will inform users on where investments and process improvements should be focused, further contributing to efficient connections and outcomes.

Through the process of preparing for this plan, the core programs and partners further developed existing relationships and formed new ones at various levels including, state, local and community level. The work done by the Governor's Workforce Sub-Cabinet related to Drive to 55 and other areas around data sharing and alignment further enhances a strong foundation for successful workforce development activity in Tennessee.

A new initiative being introduced through further policy works to address access points and their relationship to the American Job Center. Through planning, and an asset mapping process, many new non-traditional partners were identified and expressed interest in becoming access points by referring and assisting clients to connect to the public Workforce System. This structure will be evaluated by working through our partner network of training providers, libraries, community and faith-based organizations and others to provide training and limited support to expand our network by not expanding infrastructure costs. The labor force participation rate must be challenged to ensure all participants looking can make job seeker connections in their community. The role the local boards play in driving this model will be key to building an affordable and highly efficient Workforce System.

These pieces: education and workforce priority, state leadership, technology, relationship, and network create a framework and foundation that will ensure continued economic and quality of life in Tennessee.

## **B. THE STRENGTH AND WEAKNESSES OF WORKFORCE DEVELOPMENT ACTIVITIES**

Provide an analysis of the strengths and weaknesses of the workforce development activities identified above.

In preparation for WIOA implementation, Tennessee's workforce development activities were analyzed by its core and partner program staff. Initial exploration showed the significant growth of new industry and new jobs required increased partnership and coordinated communication. In addition, the team was able to identify a great strength in customer-centered customer service, the support of local government and system flexibility to be pillars in the

Workforce System. In addition, the availability of program data has provided much needed support for the development of service strategies and goal attainment across all programs.

Tennessee's Workforce System has received strong support from its State Workforce Board, Local Boards, and business leaders across the system. Local business leaders are highly engaged in their efforts to assist individuals by providing work-based opportunities. Community Colleges are developing training programs to meet the needs of employers. The coordination and alignment of core programs allow customers to access timely relevant services from all core partners through wrap-around customer services. The Department of Economic & Community Development assists in analyzing the needs of businesses moving to Tennessee and working with Tennessee's Workforce System and recruiting trainees, adding value to the workforce system. The exceptional cooperation and alignment of core program partners to deliver resources for customers needing long-term assistance to develop talent are continuously giving credit to the workforce system. The States guidelines, policy formation, monitoring and the use of the Virtual One Stop data collection system (VOS) has allowed the state to monitor the progress made by participants and the referral process across core programs to identify gaps and weakness in the delivery system.

Tennessee has transformed the way we operate to continuously improve our ability to help Tennesseans obtain high-quality jobs and careers, while also helping employers hire, train and retain skilled workers. We are very proud of where we are today and excited about where we are headed. Through the collaboration across state agencies like Tennessee Department of Human Services, Economic & Community Development, Education, and additional partners, our technological advances, and mobility we continue to make what we do more accessible to our customers, this also means that comprehensive knowledge of resources and allocation of scarce funding is maximized.

#### **GENERAL STRENGTHS:**

- Tennessee Workforce System is equipped to provide the necessary components of an emerging and growing workforce. This includes but is not limited to job placement services, support services, education and training services, and use of labor market information.
- Identified the shared responsibility in coordination and involvement of workforce and education partners in conjunction with public and privately-run programs that promote high- quality job skills training, certifications and attainment of in-demand occupations.
- Connecting job seekers and trainees to employment and training services through innovative technology (Jobs4TN) and integrated services (eligibility verification, agency referral, and leveraged funding)
- Increased awareness and expansion of partnership services and goals

#### **SPECIFIC PROGRAM AREA STRENGTHS:**

- **Governance and Leadership:** On the local level, numerous staff members have several years of experience and institutional knowledge regarding program standards, local priorities and community changes, emerging economies and changes to participant pools. These staff members serve as subject matter experts for several programs and operations in the American Job Centers and have valuable relationships local stakeholders (this includes but is not limited to local elected officials, community-based organizations, board district, and school board leaders, county sheriff, etc.)
- **One-Stop Design and Delivery:** The increased use of technology allows the Tennessee Workforce System to seamlessly integrate services, system and program changes in accordance with WIOA. The connection in Jobs4TN and VOS leverage the case management processes for all participants and programs that are involved in WIOA implementation across the state. The efficiencies realized with the common intake process and reporting will enable all programs and partners included in this Combined State Plan to mutually benefit from electronic referrals and reporting and coordinate services and tracking of co-enrolled participants, to name a few. Additionally, the

centralized and coordinated efforts from all program partners ease the communication and engagement of job seekers, employers, local government support, community partners, and additional external clients.

- As it pertains to individuals with disabilities, Tennessee serves as an Employment First state, allowing seamless integration and support for this hard to serve population.
- **Youth Program:** While the most significant program changes under WIOA impacted the services to youth, this shift-aligned with several modifications Tennessee was already making. The existing work of Pathways Tennessee (career pathways) and the Work Based Learning Champions initiative (Career and Technical Education) both led by the Tennessee Department of Education strongly support the increased need for funding services for in-school youth as well as increasing opportunities for work experiences. Regarding out-of-school youth, the Governor's Drive to 55 Alliance provides excellent support and resources to get 55 percent of Tennesseans equipped with a college degree or certificate by the year 2025. The Alliance's three initiatives - Tennessee Promise, Tennessee Reconnect and Tennessee LEAP (Labor Education Alignment Program), all serve as conduits to identify and close skills gaps to better prepare our workforce and our state for the future, most of which involves better services to youth.

Some areas for growth and improvement have been identified in asset mapping of local and state level resources, common strategy development, and meeting the growing employer demand for skilled and qualified employees. Efforts to improve these challenges have been made through hosting regional meetings with local partners to identify services provided and opportunities for increased alignment. In addition, coordinated data sharing and communication will remain areas of focus for improvement and innovation. The use of data along with integration, agility, and ability to serve those with significant barriers has always been a focus in the Workforce System; this common thread has helped shape the focus and continuation of workforce development activities statewide.

#### **GENERAL WEAKNESSES:**

The data integration among all core partners has not been fully implemented. One core partner maintains a separate data management system for tracking and case management functions. TDLWD is aware of this weakness and will be working with its core partners to develop a universal intake and assessment process for program participants. Despite the efforts of Workforce Development to inform the public about the opportunities for training and jobs, there is still lack of awareness of what this department offers. Financial and administrative integration across core partners is weak and is not where it needs to be but in time the use of Grants4TN will be used by core partners to create an effective way of using resources.

- Partnerships exist, yet competing visions and interest across programs, agencies, and sectors create system inefficiencies
- Ineffective communication across programs, agencies, and sectors
- Ineffective identification of opportunities for effective co-enrollment or referral of services
- Lack of consistent definitions, terms and/or initiatives

#### **SPECIFIC PROGRAM AREA WEAKNESSES:**

- **Governance and Leadership:** As new partners come together, so do their individualized rules, regulations, and perceived perceptions of varying systems. The lack of clarity and guidance on new program and system standards has led to varying local and regional structures competing for resources or involvement. In the same regard, strong business leaders are unsure of the level of involvement or support these leaders can offer and as a result, have chosen to remove themselves from important systems changes.
- **One-Stop Design and Delivery:** The use of Jobs4TN for Title I and Title III programs allows for referring individuals between programs and service providers, however, there is currently no automated way to ensure that participants in other partner programs are able to easily transition between programs. This

limitation, while a work in progress, may result in a participant not receiving the maximum benefit of all programs available and/or inefficient case management as a result of varying case management processes and systems. Further, while certain Title I programs require an individual to have an employment plan, such a plan is not currently held in common with other partner programs, limiting the capacity of the entire workforce system to serve participants comprehensively with their overall career goals in mind. In the same regards, funding sources that support each program are not easily accessible or adequately used to support the needs of the participants served. These two issues can result in poor program performance, inequality in resource sharing and incorrect reporting.

- **Youth Program:** As program and funding standards evolve, so do the participant populations. Specifically, regarding out-of-school youth funding, the lack of asset mapping has limited local or regional leaders' knowledge of other agencies' resources and community-based programs who can serve as partners to reach the changing youth population. In the same regard, the lack of information sharing on potential participants (i.e.: recent dropouts or juvenile offenders) complicates the outreach efforts for engaging and enrolling the hardest to serve participants.

#### **OPPORTUNITIES:**

- Expand technology and data systems to meet the WIOA integrated technology requirements and other federal initiatives
- Build responsive and proactive workforce systems grounded in collaboration with state, regional, and local leaders
- Support and encourage strategic thinking and planning of regional and local efforts in regard to business growth, retention, and recruitment
- Adapt education and training programs to meet current employment needs and growing opportunities
- Develop cross-program performance metrics and monitoring to measure progress towards reaching performance benchmarks

#### **THREATS:**

- Too complex and hard to navigate
- Insufficient feedback mechanism to inform workforce system partners so that they can adapt to the changing federal regulations and in the workforce
- Inconsistent data matching and sharing across partners and programs

### **C. STATE WORKFORCE DEVELOPMENT CAPACITY**

Provide an analysis of the capacity of State entities to provide the workforce development activities identified above.

Tennessee has implemented a workforce system designed to increase capacity and leverage resources to prevent duplication of services resulting in the ability to serve customers effectively. The functional design of the Tennessee Workforce System started with the co-location of the four core program partners (Title I, Title II and Title III and Title IV), allowing for optimal coordination in both strategic planning and operational execution. Besides the four core programs, Tennessee has several other program services that expand capacity and enhance the delivery of services for those customers who need long-term intervention. This includes broadening services to a more diverse population of job seekers across the state. A streamlined customer experience through referrals and to services from one partner to another increase the efficiency of all partners, allowing specialized services to function optimally and assists in eliminating the duplication of services. Furthermore, in an effort to assist customers with needed services, more partnerships with community service providers are sought to increase capacity, especially in

rural areas across the state, beyond bricks-and-mortar facilities, Tennessee utilizes technology to increase access to its services through mobile American Job Center services that provide for rural and urban communities who lack access or would have difficulty accessing services at the traditional AJC.

The Tennessee American Job Centers (AJCs) are at the forefront of the workforce activities and represent the vision of the workforce services delivery system. Currently, there are 23 American Job centers spread across the state providing comprehensive access. In addition to these centers, Tennessee has 62 affiliate sites and access points with six mobile units that travel the state and provide service to customers in a mobile capacity. The American Job Centers are overseen at the state level by the Division of Workforce Services and managed locally by each of the Local Workforce Development Boards. Local boards are comprised of local representatives from businesses, labor, partner agencies, and other key stakeholders, creating a diverse and functional group. The local boards, in alignment with the State's vision, provide a front-line strategic implementation for state-wide initiatives in addition to their locally-determined priorities. The Tennessee State Workforce Board is the governing body charged with the continuous improvement of the workforce system and oversight of Workforce Innovation and Opportunity Act (WIOA) funds and programs. The State Board ensures that state workforce activities are aligned with the efforts of economic development, education, workforce development, and business stakeholders at the local, regional, and state levels. This multifaceted alignment of public and private stakeholders creates a workforce system that is demand-driven, flexible, and responsive to the needs of Tennesseans.

State initiatives include sector strategies, career pathway development, and delivery of standardized business services. Local priorities include serving priority populations, youth program services, targeted sector partnerships, and work-based learning services. Local boards are tasked with procuring a one-stop operator for the daily operation of their respective center(s) in accordance with WIOA 121(d). These boards oversee workforce activities by partnering and using Memorandums of Understanding (MOU) to implement core, non-core, and other partner programs. The technical and community colleges in the state are another vehicle the state uses to expand training and educational opportunities to those needing skills upgrades and educational backgrounds to enter better-paying jobs.

State merit-staff employees, along with other core partner staff, provide career services. These services are provided for job seekers to include adults, older youth, younger youth, dislocated workers, and employers. Other services provided are labor exchange services including Reemployment Services and Eligibility Assessment (Unemployment Insurance (UI) claimants), veterans, migrant and seasonal farmworkers, older workers, SNAP program recipients, Adult Education and Vocational Rehabilitation services, and others. These services are provided in a seamless manner, ensuring that the customer is not aware which program partner services are provided. The core partner services and optional partners share space through collocation and services throughout the Tennessee AJC System.

The Tennessee workforce system's capacity rests in the supportive nature of its core and partner programs and the agencies that provide the applicable activities and services. Included within each of these agencies is the collaborative provision of funding and service strategies that best serve the target participant populations and the emerging workforce.

## **WORKFORCE SYSTEM CAPACITY – TECHNOLOGY DEVELOPMENT AND INTEGRATION**

The development and implementation of a technology-based data and case management system, Jobs4TN, has transformed the way information is collected and shared across programs. The system fully integrates Adults, Dislocated Workers, Youth, Veterans, Work Opportunity Tax Credit, SNAP E&T, TAA, RESEA, and Unemployment Insurance programs under one system. The addition of Adult Education program (January 2017) and interfacing of Vocational Rehabilitation services (TBD) in the near future will establish a more integrated and seamless system for data and program information management.

## **WORKFORCE SYSTEM CAPACITY – PHYSICAL INFRASTRUCTURE**

Much like the integration of technology, the workforce system relies heavily on its physical infrastructure and presence across the state. This consists of multiple on and off ramps to access services provided by WIOA Combined State Plan Partners. This includes, but is not limited to, the inclusion of existing and new partner programs' physical presence and/or directed referral of services within a Comprehensive, Affiliate or Access Point location of a Tennessee American Job Center. The 85 AJCs and access points across the state, plus the six mobile career coaches, provide easy access to employment services, such as education and training for job seekers, recruitment and human resource assistance for businesses, and information for local and regional economic developers. In support of Tennessee current and future businesses, each American Job Center offers a vast array of services, including hosting job fairs, job postings, and screening potential employees, sharing important Labor Market Information about Tennessee's labor market, and providing training services. All of these services, and more, are made available to businesses and job seekers at no cost. The identification of business needs and employee skills levels are vital to the growth of Tennessee business and are a key piece of the workforce system's success in years to come.

In addition to the services provided by any Tennessee American Job Center, additional partner services, and activities are made available through the following:

- Adult Education Regional Districts
- Rehabilitation Services Local offices and Tennessee Rehabilitation Centers
- Human Services County Offices
- Department of Education local school districts

## **WORKFORCE SYSTEM CAPACITY – SERVING DISADVANTAGED POPULATIONS**

While there are tremendous growth and expansion of employment opportunities for Tennessee jobseekers, there are numerous individuals who require additional support to overcome their barriers to employment. In cooperation with the Department of Human Services, all partner programs will be able to refer participants with the greatest barriers to employment, especially those with disability, to Vocational Rehabilitation Services and/or TANF or SNAP E&T services. Using VOS and additional case management systems, all partners will collect basic information from the WIOA participant, allowing for an assessment of the participant's needs. The “no wrong door” approach, will assure all participants navigate through the workforce system with the support of well-trained staff to identify the most beneficial workforce or supportive service and/or training program. The warm handoff between partners and programs, along with the necessary participant information, will assure that those participants with the greatest barriers to employment have the best possible opportunity to succeed in training or entering in-demand occupations.

### **3. STATE STRATEGIC VISIONS AND GOALS**

The Unified or Combined State Plan must include the State's strategic vision and goals for developing its workforce and meeting employer needs in order to support economic growth and economic self-sufficiency. This must include—

#### **A. VISION**

Describe the State's strategic vision for its workforce development system.

On April 20, 2011, Tennessee Gov. Bill Haslam announced the Jobs4TN plan, which lays out the administration's economic development strategy, resulting from a top-to-bottom review of all state agencies. The governor's Jobs4TN plan focused on:

- Prioritizing the strategic recruitment of target industries;
- Assisting existing Tennessee businesses in expansions and remaining competitive;

- Supporting regional and rural economic development strategies;
- Investing in innovation and reducing business regulation.

“My top priority is for Tennessee to be the No. 1 location in the Southeast for high-quality jobs,” Haslam said. “Our Jobs4TN plan is a blueprint for doing just that. By leveraging our existing assets in each region, we will be able to attract new businesses to the state while helping our existing businesses expand and remain competitive. We will also be making significant investments in innovation to position Tennessee as a national leader well into the future.”

The Governor’s Jobs4TN plan was developed over a 45-day period and involved interviews with more than 300 stakeholders, community leaders, and national experts as well as through seven roundtables across the state. Many of these goals and objectives were included in a proactive modification of our State Workforce Investment Act plan which also re-engineered our Rapid Response and dislocated worker efforts within the regional “Jobs Base Camps” structure set in motion by the Governor. Establishing regional “jobs base camps” across the state, Economic and Community Development fundamentally restructured its field staff to establish a “jobs base camp” in nine economic regions across the state. Each base camp worked with local partners to develop and/or revise a regional economic development plan and align existing federal and state resources around that plan. This included the local workforce boards as a strategic partner in this initiative.

A key function of these jobs base camps was reaching out to rural counties to incorporate them into broader regional economic development strategies that leverage existing resources and maximize the assets of rural communities.

The Workforce System is another component of the Governor’s comprehensive jobs plan to support and encourage investment in new business and existing business in Tennessee. His jobs plan also includes education reform initiatives that focus on children in the classroom and a well-educated, quality workforce in Tennessee, which is the most important long-term strategy for successful economic development.

**Workforce System Vision** is to increase the competitive position of Tennessee business through the development of a highly skilled Workforce.

**GOAL 1:** Ensure Tennessee employers have access to a skilled, high-quality workforce in today’s changing economy.

To accomplish this goal the Tennessee workforce system is engaging the business community and further aligning education and workforce training opportunities with the needs of Tennessee employers; ensuring training is predicated upon a labor market need, labor market information, and sector strategy input and expanding efforts to recruit and retain workers.

**Strategies:**

The Tennessee Workforce Development shall focus on the state’s most significant short-and long-term training opportunities received by individuals that are aligned with the needs of businesses and are producing successful outcomes for individuals. The strategy will also focus on creating, fostering, and expanding sector strategies based upon input provided by employers and data provided by the state’s labor market information. Efforts will continue to cultivate partnerships between sector strategies and apprenticeship programs. In addition, we will continue to strengthen the relationship and work with economic development entities to develop practices aimed at retaining workers and to meet the needs of incoming and existing industries and businesses.

**GOAL 2:** Ensure all Tennesseans who want to work have access to an open, streamlined, and effective workforce development system.

This goal will be accomplished by maximizing core program coordination and utilizing career pathways as an umbrella model in AJCs. In addition, evaluating to ensure that training and education requirements match the state's labor market needs as well as reducing barriers to employment for underrepresented populations.

Tennessee is leading the way nationwide in K-12 education reform. We have continued that momentum and expanded our focus to include post-secondary education through a pair of innovative initiatives: Drive to 55 and the Tennessee Promise.

Drive to 55 aims to bring the percentage of Tennesseans with college degrees or certifications to 55 percent by the year 2025. It's not just a mission for higher education; it's also a mission for workforce and economic development.

Strategies: Tennessee will continue to develop a marketing plan to create awareness about services offered by AJCs and ensure certain accountability and transparency of funding. Tennessee will continue to provide the State Workforce Development Board a joint partner service annual report which demonstrates program performance to help the Board identify opportunities for funding allocation. We will use Labor market analysis and the needs communicated by employers to inform ongoing AJC system planning and development and expand employer education efforts regarding the benefits of hiring underrepresented workforce populations. We will develop and enhance programs that incentivize employment of underrepresented workforce populations. Also, we will continue to utilize integrated training and education programs as a way to efficiently move adults in need of literacy skills or high school equivalency certificates into the workplace.

**GOAL 3:** Prepare Tennessee youth to be both career and college ready.

Strategies: Tennessee plans to promote career exploration through career pathways so young people can acquire educational, technical, and social skills that enhance career development. Working with education partners and stakeholders, we will develop assessment tools and information regarding career pathways. Working with LWDB policy teams, we will enhance efforts to improve communication, coordination, and collaboration in preparing youth for post-secondary studies or the world of work. Other strategies include: incorporating career pathways system as a model to better guide young people, incorporating pre-apprenticeship programs to offer young people opportunities to gain technical skills that are best learned on the job, and disseminating information regarding future in-demand labor market needs to young adults when entering the workforce system. In addition, assessment tools will be used to identify needs for support services and partners that work together to provide and continually assess whether services provided are effective in achieving improved career readiness.

## **TENNESSEE RECONNECT**

Tennessee Reconnect is the Drive to 55 initiatives to help more adults complete a post-secondary degree or credential. Tennessee has between 900,000 and 1 million adults with some college but no degree. It is impossible to achieve the mission of the Drive to 55 without re-engaging these individuals and helping them finish their degree or certificate.

As part of Tennessee Reconnect, all Tennessee adults can now attend and earn a diploma or certificate at any of our 27 Tennessee Colleges of Applied Technology (TCATs) completely free of tuition and fees. In the fall of 2018, participants will have access to Community Colleges in addition to the TCATs.

To make college a reality, Tennessee Reconnect programs are designed to help busy adults achieve dreams of attaining a college degree or certificate to be equipped for the workforce.

## **LABOR EDUCATION ALIGNMENT PROGRAM (LEAP)**

Tennessee Labor Education Alignment Program (LEAP) ensures that post-secondary institutions are producing the skills and credentials that Tennessee employers actually need.

Tennessee LEAP eliminates skills gaps across the state in a proactive, data-driven and coordinated manner by encouraging collaboration across education and industry and by utilizing regional workforce data to identify and then fill skills gaps across the state.

With a competitive grant distribution, state funds are being utilized to support local alignment groups to develop skills gap forecasts, identify the highest priorities, and develop programs or purchase equipment needed to fill those gaps.

Governor Haslam's Workforce Sub-Cabinet, consisting of representatives from the Governor's office, Department of Economic and Community Development, Department of Labor and Workforce Development, Department of Education, Department of Human Services, Tennessee Higher Education Commission and Tennessee Board of Regents, are leading this charge and meet regularly to review, select and support the grant recipients.

## **WORKFORCE360°**

Tennessee aims to be the most aligned state in the nation between workforce, education, and industry. Enter Workforce360°, a systematic partnership among state agencies and the higher education system that delivers a highly skilled workforce for your business.

The best solutions are most often achieved through a collaborative approach. When companies allow the state team to become an extension of their workforce development and recruitment efforts, we are able to provide support that is truly unique to their business. Our project-based system works with each company to identify workforce gaps and streamlines solutions across Tennessee by utilizing state department communications, interaction, and resources. Region-based tactical teams provide a timely response to immediate business workforce needs, as well as strategic planning for long-term requirements.

A key part of customer outreach and satisfaction is connectivity, expectation, and communication. This is accomplished through the modernization of our state's labor exchange functions housed within the Jobs4TN platform. This platform provides customers with real-time labor market information, virtual recruitment, resume matching, case management and more recently the addition of the unemployment insurance module where all customer workforce functions are housed in a central electronic tool.

This allows 24/7 access to hiring employers, job search and job development which serve to drive efficiency to meet employer demand. This also serves as a central function around business intelligence to better identify and serve customers at all levels. Partner agencies encourage clients looking for work to register in Jobs4TN to better connect, serve and drive response from the workforce system to best meet their needs.

## **ONE-STOP CENTERS UNDER WIOA**

The publicly funded workforce system envisioned by WIOA is quality-focused, employer-driven, customer-centered, and tailored to meet the needs of regional economies. It is designed to increase access to, and opportunities for, the employment, education, training, and support services that individuals need to succeed in the labor market, particularly those with barriers to employment. It aligns workforce development, education, and economic development programs with regional economic development strategies to meet the needs of local and regional employers, and provide a comprehensive, accessible and high-quality workforce development system. This is accomplished by providing all customers access to high-quality one-stop centers that connect them with the full range of services available in their communities, whether they are looking to find jobs, build basic educational or occupational skills, earn a postsecondary certificate or degree, or obtain guidance on how to make career choices, or are businesses and employers seeking skilled workers.

One-Stop Centers reflect innovative and effective service design and high-quality one-stop centers in several ways - some significant methods are as follows:

- Use of an integrated and expert intake process for all customers entering the one-stop centers

- Design and implement practices that actively engage industry sectors and use economic and labor market information, sector strategies, and career pathways
- Develop, offer, and deliver quality business services that assist specific businesses and industry sectors in overcoming the challenges of recruiting, retaining, and developing talent for the regional economy
- Balance traditional labor exchange services with strategic talent development within a regional economy. This includes the use of market-driven principles and labor market information that help to define a regional economy, its demographics, its workforce and its assets and gaps in skills and resources.
- Improve the skills of job seeker and worker customers. Tennessee American Job Centers offer access to education and training, leading to industry-recognized credentials through the use of career pathways, apprenticeships, and other strategies that enable customers, including those with disabilities, to compete successfully in today's global economy. They provide businesses with access to the quantity and quality of talent they need and support upskill/backfill strategies that expand job opportunities in the community.
- Ensure meaningful access to all customers. AJCs must be physically and programmatically accessible to all customers, including individuals with disabilities
- Include both virtual and center-based service delivery for all customers

One-Stop Centers operate with Integrated Management Systems and High-Quality Staffing - some significant ways this is displayed is by:

- Reflect the establishment of robust partnerships among partners with an increased physical presence
- Organize and integrate services by function (rather than by program)
- Develop and maintain integrated case management systems that inform customer service throughout the customer's interaction with the integrated system and allow information collected from customers at intake to be captured once
- Use common performance indicators
- Provide continuous cross-training opportunity for AJC and partner program staff.

The workforce system will partner and align with various agencies and organizations to improve the educational attainment and workforce skills of Tennesseans. We will continue to modernize technology and embrace an attitude as change agents. Together, we will create a culture that delivers collaborative approaches across state agencies for success, thereby making Tennessee the 1 state in the southeast for high-quality jobs.

## **B. GOALS**

Describe the goals for achieving this vision based on the above analysis of the State's economic conditions, workforce, and workforce development activities. This must include—

- A. Goals for preparing an educated and skilled workforce, including preparing youth and individuals with barriers to employment\* and other populations.\*\*
- B. Goals for meeting the skilled workforce needs of employers.

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\* Individuals with barriers to employment include displaced homemakers; low-income individuals; Indians, Alaska Natives, and Native Hawaiians; individuals with disabilities, including youth who are individuals

with disabilities; older individuals; ex-offenders; homeless individuals, or homeless children and youths; youth who are in or have aged out of the foster care system; individuals who are English language learners, individuals who have low levels of literacy, and individuals facing substantial cultural barriers; eligible migrant and seasonal farmworkers (as defined at section 167(i) of WIOA and Training and Employment Guidance Letter No. 35-14); individuals within 2 years of exhausting lifetime eligibility under the Temporary Assistance for Needy Families Program; single parents (including single pregnant women); and long-term unemployed individuals.

\*\* Veterans, unemployed workers, and youth and any other populations identified by the State.

***Jobs and Economic Goal: Make TN the 1 in the Southeast for High-Quality Jobs***

“Education is a top priority in Tennessee. Our progress in K-12 and focus on workforce development makes it clear that Tennessee is supporting the development of a better-educated and highly trained workforce on a long-term basis.” // Tennessee Governor Bill Haslam

The overarching goal of the Governor’s administration is making Tennessee the number one State in the Southeast for high-quality jobs. The Governor is invested in the first-hand perspective of his citizens and constantly seeking opportunities to meet and listen to those who are “on the ground” creating jobs in the State. From meeting with small business owners, economic development professionals, and local government and community leaders, to visiting job sites and touring factories, the Governor wants to hear directly how state government could improve strategies and practices to increase the number of jobs in the State. This Combined State Plan outlines the collaborative efforts that will guide a focused partnership between the Workforce System, specifically Title I, II, III and IV, and economic development in growing existing business and attracting new business to the State. The functional alignment outlined in this Plan will support economic development by ensuring that all Tennesseans have the skills and knowledge to meet the needs of employers now and in the future. The five objectives listed below provide the framework by which the Governor seeks to make Tennessee’s workforce reign superior in the Southeast:

**Objective I** - Identify, assess, and certify skills for successful careers

**Objective II** - Promote economic development by connecting workforce development with job creation and growth

**Objective III** - Increase employer engagement with the workforce development system

**Objective IV** - Expand programs of study that bring together a sequence of career-focused courses that start in high school and extend through college

**Objective V** - Increase work-integrated learning

***Education and Workforce Development Goal: Create a more seamless path from high school, post-secondary education or training to the workforce***

As a strong advocate for education reform, Governor Haslam understands that this is the pipeline to a successful and ever-growing workforce. He exemplifies this commitment by working alongside teachers, parents, and education leaders to ensure that the innovative changes which have been made in recent years to the K-12 and higher education systems are implemented effectively and that the state successfully capitalizes on the momentum that presently exists in education. In addition, Governor Haslam is a former chair of the Education and Workforce Committee for the National Governor’s Association and continues to serve on this committee. This committee has jurisdiction over issues in the area of education (including early childhood, K-12 and postsecondary) as well as in the areas of workforce development. Members of the committee ensure that the governor’s views are represented in the shaping of Federal policy.

In Tennessee, Governor Haslam has made college access, as well as college success a priority by committing to help each region raise its educational attainment rates and enhance its workforce development efforts through innovative public/private partnerships. He knows that to prepare Tennesseans for a competitive 21st-century economy, Tennessee must create a more seamless path from high school, post-secondary education or training, to the workforce. The Workforce System plays a crucial role in assisting with building the skills and knowledge capacity of the Tennessee citizens. All Tennesseans will have access to the same basic workforce services regardless of the access point and educational resources invested by the Workforce System which will focus on credentials and certifications to pursue a career path.

**Objective I** - Leverage resources, including WIOA statewide and local funding and other non-WIOA funds, and partnerships across departments and programs to aid in developing more seamless paths from training into the workforce

**Objective II** - Increase the number of credentials and certificates

**Objective III** - Improve the availability and quality of career and education guidance for students of all ages in high school and postsecondary institutions

***Conservative Fiscal Leadership Goal: Eliminating duplication and leveraging dollars to provide more opportunities to existing job seekers and the emerging workforce***

Governor Haslam has a record of sound, public and private sector financial management as well as successful job recruitment. It is with this experience that he has been able to pull the State through difficult economic times while keeping taxes low and fostering a business-friendly environment critical to continued job growth. The Governor understands that families and businesses have made sacrifices to sustain the State’s economy, and likewise, the state government has been forced to prioritize its fiscal choices. By making tough decisions, managing the State budget conservatively, and guiding the state’s finances into a position of strength, the Governor is helping Tennessee compete in the global economy and successfully attract the “jobs of the future” to Tennessee. The Workforce System’s functional alignment will assist in eliminating duplication and leveraging dollars to provide more opportunities to job seekers and the emerging workforce. The following objectives provide more details about how the State plans to preserve its fiscal integrity and increase opportunities for the existing and emerging workforce:

**Objective I** - Improve job search and placement services for unemployed and underemployed workers

**Objective II** - Establish cost-effective co-investment models, across government funding streams and other funding streams

**C. PERFORMANCE GOALS**

Using the table provided in Appendix 1, include the State's expected levels of performance relating to the performance accountability measures based on primary indicators of performance described in section 116(b)(2)(A) of WIOA. (This Strategic Planning element only applies to core programs.)

**Table 1. Employment (Second Quarter after Exit)**

Program	PY 2017 Proposed/ Expected Level	PY 2017/ Negotiated/ Adjusted Level	PY 2018 Proposed/ Expected Level	PY 2019 Proposed/ Expected Level
Adults	74.00	83.00	74.00	74.00
Dislocated Workers	81.00	84.00	81.00	81.00
Youth	75.00	79.00	75.00	75.00

Adult Education	Baseline	Baseline	Baseline	Baseline
Wagner-Peyser	69.00	68.00	69.00	69.00
Vocational Rehabilitation	Baseline	Baseline	Baseline	Baseline

User remarks on Table 1

**Table 2. Employment (Fourth Quarter after Exit)**

Program	PY 2017 Proposed/ Expected Level	PY 2017 Negotiated/ Adjusted Level	PY 2018 Proposed/ Expected Level	PY 2019 Proposed/ Expected Level
Adults	74.00	78.00	74.00	74.00
Dislocated Workers	81.00	81.00	81.00	81.00
Youth	75.00	79.50	75.00	75.00
Adult Education	Baseline	Baseline	Baseline	Baseline
Wagner-Peyser	69.00	67.00	69.00	69.00
Vocational Rehabilitation	Baseline	Baseline	Baseline	Baseline

User remarks on Table 2

**Table 3. Median Earnings (Second Quarter after Exit)**

Program	PY 2017 Proposed/ Expected Level	PY 2017 Negotiated/ Adjusted Level	PY 2018 Proposed/ Expected Level	PY 2019 Proposed/ Expected Level
Adults	4,300.00	7,000.00	4,300.00	4,300.00
Dislocated Workers	7,300.00	7,400.00	7,300.00	7,300.00
Youth	2,700.00	Baseline	2,700.00	2,700.00
Adult Education	Baseline	Baseline	Baseline	Baseline
Wagner-Peyser	4,713.00	4,913.00	4,713.00	4,713.00
Vocational Rehabilitation	Baseline	Baseline	Baseline	Baseline

User remarks on Table 3

**Table 4. Credential Attainment Rate**

Program	PY 2017 Proposed/ Expected Level	PY 2017 Negotiated/ Adjusted Level	PY 2018 Proposed/ Expected Level	PY 2019 Proposed/ Expected Level
Adults	73.00	75.50	73.00	73.00
Dislocated Workers	77.00	79.00	77.00	77.00
Youth	65.00	81.50	65.00	65.00
Adult Education	Baseline	Baseline	Baseline	Baseline
Wagner-Peyser	n/a	n/a	n/a	n/a
Vocational Rehabilitation	Baseline	Baseline	Baseline	Baseline

User remarks on Table 4

**Table 5. Measurable Skill Gains**

Program	PY 2017 Proposed/ Expected Level	PY 2017 Negotiated/ Adjusted Level	PY 2018 Proposed/ Expected Level	PY 2019 Proposed/ Expected Level
Adults	Baseline	Baseline	Baseline	Baseline
Dislocated Workers	Baseline	Baseline	Baseline	Baseline
Youth	Baseline	Baseline	Baseline	Baseline
Adult Education	37.00	37.00	37.00	37.00
Wagner-Peyser	n/a	n/a	n/a	n/a
Vocational Rehabilitation	Baseline	Baseline	Baseline	Baseline

User remarks on Table 5

**Table 6. Effectiveness in Serving Employers**

Program	PY 2017 Proposed/ Expected Level	PY 2017 Negotiated/ Adjusted Level	PY 2018 Proposed/ Expected Level	PY 2019 Proposed/ Expected Level
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Adults	Baseline	Baseline	Baseline	Baseline
Dislocated Workers	Baseline	Baseline	Baseline	Baseline
Youth	Baseline	Baseline	Baseline	Baseline
Adult Education	Baseline	Baseline	Baseline	Baseline
Wagner-Peyser	Baseline	Baseline	Baseline	Baseline
Vocational Rehabilitation	Baseline	Baseline	Baseline	Baseline

User remarks on Table 6

<b>Measure: Employment in 2<sup>nd</sup> Qtr. After Exit</b>	<b>PY 17 / F Y 18 Proposed/ Expected Level</b>	<b>PY 17 / F Y 18 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 19 Proposed/ Expected Level</b>
<b>Adults</b>	74%	80%	74%	74%
<b>Dislocated Workers</b>	80.5%	83%	80.5%	80.5%
<b>Youth (Education or Employment)</b>	74.5%	76%	74.5%	74.5%
<b>Wagner-Peyser / Labor Exchange</b>	69%	65%	69%	69%
<b>Adult Education</b>	Baseline	Baseline	Baseline	Baseline
<b>Vocational Rehabilitation</b>	58.5%	Baseline	58.5%	58.5%

<b>Measure: Employment in 4<sup>th</sup> Qtr. After Exit</b>	<b>PY 17 / F Y 18 Proposed/ Expected Level</b>	<b>PY 16 / F Y 17 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 17 / F Y 18 Negotiated/ Adjusted Level</b>
<b>Adults</b>	70.5%	75%	70.5%	70.5%
<b>Dislocated Workers</b>	79%	79%	79%	79%
<b>Youth (Education or Employment)</b>	69.5%	78%	69.5%	69.5%
<b>Wagner-Peyser / Labor Exchange</b>	68.5%	64%	68.5%	68.5%
<b>Adult Education</b>	Baseline	N/A	Baseline	Baseline
<b>Vocational Rehabilitation</b>	54%	N/A	54%	54%

<b>Measure: Median Earnings 2<sup>nd</sup> Qtr. After Exit</b>	<b>PY 17 / F Y 18 Proposed/ Expected Level</b>	<b>PY 17 / F Y 18 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 19 Proposed/ Expected Level</b>
<b>Adults</b>	\$4300	\$7000	\$4300	\$4300
<b>Dislocated Workers</b>	\$7300	\$7400	\$7300	\$7300
<b>Youth</b>	\$2700	N/A	\$2700	\$2700
<b>Wagner-Peyser / Labor Exchange</b>	\$4713	\$4913	\$4713	\$4713
<b>Adult Education</b>	Baseline	N/A	Baseline	Baseline
<b>Vocational Rehabilitation</b>	Baseline	N/A	Baseline	Baseline

<b>Measure: Credential Attainment Rate</b>	<b>PY 17 / F Y 18 Proposed/ Expected Level</b>	<b>PY 17 / F Y 18 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 19 Proposed/ Expected Level</b>
<b>Adults</b>	73%	75.5%	73%	73%
<b>Dislocated Workers</b>	77%	79%	77%	77%
<b>Youth</b>	65%	81.5%	65%	65%
<b>Wagner-Peyser / Labor Exchange</b>	NA	NA	NA	NA
<b>Adult Education</b>	Baseline	NA	Baseline	Baseline

<b>Measure: Credential Attainment Rate</b>	<b>PY 17 / F Y 18 Proposed/ Expected Level</b>	<b>PY 17 / F Y 18 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 19 Proposed/ Expected Level</b>
<b>Vocational Rehabilitation</b>	TBD	NA	TBD	NA

<b>Measurable Skill Gains</b>	<b>PY 16 / F Y 17 Proposed/ Expected Level</b>	<b>PY 16 / F Y 17 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 19 Proposed/ Expected Level</b>
<b>Adults</b>	Baseline	NA	Baseline	Baseline
<b>Dislocated Workers</b>	Baseline	NA	Baseline	Baseline
<b>Youth</b>	Baseline	NA	Baseline	Baseline
<b>Wagner-Peyser / Labor Exchange</b>	NA	NA	NA	NA
<b>Adult Education</b>	37%	37%	37%	37%
<b>Vocational Rehabilitation</b>	TBD	NA	TBD	TBD

<b>Measure: Effectiveness in Serving Employers</b>	<b>PY 17 Proposed/ Expected Level</b>	<b>PY 17 Negotiated/ Adjusted Level</b>	<b>PY 18 Proposed/ Expected Level</b>	<b>PY 19 Proposed/ Expected Level</b>
<b>Adults</b>	Baseline	N/A	Baseline	Baseline
<b>Dislocated Workers</b>	Baseline	N/A	Baseline	Baseline
<b>Youth</b>	Baseline	N/A	Baseline	Baseline
<b>Wagner-Peyser / Labor Exchange</b>	Baseline	N/A	Baseline	Baseline
<b>Adult Education</b>	Baseline	N/A	Baseline	Baseline
<b>Vocational Rehabilitation</b>	Baseline	N/A	Baseline	Baseline

## C. ASSESSMENT

Describe how the State will assess the overall effectiveness of the workforce development system in the State in relation to the strategic vision and goals stated above in sections (b)(1), (2), and (3) and how it will use the results of this assessment and other feedback to make continuous or quality improvements.

While the state has not yet defined the process to assess the overall effectiveness of the workforce development system, the continuation of the WIOA Focus Group Meetings (as described in section 4 - Coordination with State Plan Programs) will allow for the ongoing discussions amongst partners. Quarterly convening to further develop and define policies and procedures will assist in the improvement of the Workforce System service delivery structure. Feedback will continuously be considered and integrated into all core and partner programs.

The Department of Labor and Workforce Development makes use of many activities to assess the successful provisions of workforce services and the delivery of Tennessee's strategy and goals. The activities discussed below all play a role in ensuring continuous improvement in terms of observing federal and state regulations as well as state and local board policies.

The first way in which the State ensures the overall effectiveness of the workforce development system is through conducting yearly assessing the systems function through onsite monitoring. Once a year, the LWDBs host a team of state program monitoring staff. The staff conducts a review to ensure that program and fiscal activities in the area are based on the local plan, federal regulations, state policies and the local policies. The staff will also conduct interviews to ensure understanding of regulations determining the cohesiveness of local processes. If the team identifies exceptions, the LWDA is given a list of corrective action tasks to complete. These corrective actions provide the LWDAs opportunity to improve their process and show continuous improvement of the delivery of services.

The Virtual Data Collection System (VOS) that LWDAs use to document information on services provided to individuals is also assessed and monitored by compliance unit staff to support the PAR monitors. The compliance unit staff conducts continuous desk-top monitoring to ensure all support documentation is uploaded in VOS and that participants are eligible for services. The results of the findings, if any, will be provided to PAR to use it as a part of their review process when they visit the particular LWDA.

As required in WIOA and state guidance, Local boards monitor their sub-recipients to ensure that their processes are adequate for reporting and evaluating purposes including their compliance with the terms of grants and contracts. LWDAs must monitor to determine that necessary reports are provided to the state in a timely manner and validate the accuracy of the data reported within the American Job Center system. Finally, the One-Stop Operator performs quality assurance by continuously reviewing the eligibility of participants, services provided and access to services by proactively intervening to avoid noncompliance. This continuous monitoring assessment of the delivery system

safeguards that each LWDB is able to carry out the Governor’s vision in an effective manner.

## **E. STATE STRATEGY**

The Unified or Combined State Plan must include the State's strategies to achieve its strategic vision and goals. These strategies must take into account the State’s economic, workforce, and workforce development, education and training activities and analysis provided in Section (a) above. Include discussion of specific strategies to address the needs of populations provided in Section (a).

1. Describe the strategies the State will implement, including industry or sector partnerships related to in-demand industry sectors and occupations and career pathways, as required by WIOA section 101(d)(3)(B), (D). “Career pathway” is defined at WIOA section 3(7) and includes registered apprenticeship. “In-demand industry sector or occupation” is defined at WIOA section 3(23).

Aligning Tennessee’s local workforce development areas with Tennessee’s Economic and Community Development (ECD) base camps, allowed Tennessee’s Workforce System an opportunity to regionalize economic and workforce development activities and optimize opportunities to share and leverage resources in the areas of workforce development partnerships. This realignment was a pivotal strategy for implementing sector partnerships between education, workforce, and economic development.

Tennessee’s Drive to 55 goal is to equip at least 55% of Tennesseans with a college degree or certificate by 2025. The statewide Drive to 55 initiative, in which all training providers will have to provide training that results in credentials and skills upgrades to meet the workforce needs and those of the industry sectors demanding skilled workers, refined the relationships between ECD, workforce development, and career and technical education. These key partnerships started with a supply and demand outlook then expanded to a development and design continuum for building a pipeline of highly skilled workers for Tennessee employers.

Through building the local workforce development board’s engagement, developing regional and local strategies, and leveraging data and partnerships Tennessee has implemented evidence-based sector strategies and career pathways.

## **BUILDING THE LOCAL WORKFORCE DEVELOPMENT BOARD’S ENGAGEMENT**

To meet the needs of employers and align education and training opportunities with targeted industries and occupations, local workforce development boards are equipped with regional planning councils which include members of the core partners as well as other partners. The regional planning council members are equipped to identify and advise the local boards on regional and local in-demand and emerging sectors. Aligning all workforce system partners facing business or industry allows local workforce boards to identify skills gaps and make data-informed decisions to correlate and identify a potential underrepresented talent pool (public assistance, reentry, an aging workforce, rural distressed counties, etc.) for the industry.

The board's engagement assists with building regional and local talent pipelines, which is led by the local workforce boards and implemented by the local Business Service Team (BST) members. BST members are tasked with maintaining relationships with employers for the purpose of placing workers trained through the employer-focused workforce development and postsecondary education systems.

### **REGIONAL INDUSTRY ENGAGEMENT**

Tennessee's investment of its resources to develop strategies that fit individual industry sector needs, particularly the high-growth sectors of the economy is a priority. The State Workforce Development Board (SWDB) implemented rigorous local and regional planning elements and requirements to drive high-quality career pathways and strategies. Locally and regionally-based sector partnerships have been formed to provide a mechanism for establishing sector strategies throughout the state. Workforce services have to tie most of its resources for training workers to those industry sectors that drive the states existing and emerging economy, while partnering with the education system developing the curriculum necessary for building these skills.

East Tennessee had a regional Education to Employment Summit (E2E) designed to bring together k-12 and post-secondary educational leaders, business and industry leaders, economic and workforce development professionals, and government leaders to discuss each party's role in developing the workforce pipeline. Local business and industry leaders shared what they need to be successful and how k-12 and post-secondary could help them.

Southeast Local Workforce Development Area developed work-based learning opportunities at Hamilton County High Schools in conjunction with an industry partner Gestamp, a top tier automobile production supplier. The partnership allows high school students an opportunity to work a full day and gain on-the-job training while seamlessly earning their high school diploma and postsecondary credit.

Through the Registered Electrical Apprenticeship Preparation (REAP) initiative, in partnership with Amtek, an electrical contracting and engineering career pathway was established at Lake County High. Graduating seniors expressing an interest in an electrician career participated in a 10-week pre-apprenticeship program to learn the fundamentals of basic electricity and construction applications. Those who successfully completed the program were eligible for hire and could be accepted into the 4-year registered apprenticeship program.

### **LEVERAGING DATA AND PARTNERSHIPS TO INFORM STRATEGIES AND DRIVE PERFORMANCE**

TN uses long term projection data to identify in-demand industries and occupations. P20 Connect TN is the state's longitudinal data system, which contains data across sectors and over time to illustrate the state's progress in education and workforce development allowing policymakers and practitioners to make fact-based decisions about how best to promote opportunities for all Tennesseans. The Workforce Insights, Research and Reporting Engine Division also known as WIRED continuously produces information collected by Labor Market Information to assist local workforce development areas in determining strategy and drive evidence-based decisions. The state and local workforce

boards have access to a broad range of economic and administrative data that can be leveraged to help sector partnerships and activities, coupled with adding employers and regional council inclusion, yields robust data-driven decisions by understanding the needs of the current and future workforce and to assist with prioritizing target industries.

The State is developing an apprenticeship strategy to support the unique needs and concerns of Tennesseans.

## **CAREER PATHWAYS**

Maximizing core program coordination and utilizing career pathways as well as evaluating to ensure that training and education requirements match the state's labor market needs allows Tennessee Workforce Areas an opportunity to lead the way nationwide in K-12 education reform. We have continued that momentum and expanded our focus to include post-secondary education through a pair of innovative Drive to 55 initiatives through Tennessee Pathways and the Tennessee Promise.

Tennessee's workforce development areas promote career exploration through career pathways also known as TN Pathways so young people can acquire educational, technical, and social skills that enhance career development. Working with regional councils including the regional pathways coordinators, we have enhanced efforts to improve communication, coordination, and collaboration in preparing youth for post-secondary studies or the world of work. Other strategies include: incorporating career pathways system as a model to better guide young people, incorporating pre-apprenticeship programs to offer young people opportunities to gain technical skills that are best learned on the job, and disseminating information regarding future in-demand labor market needs to young adults when entering the workforce system.

Tennessee Pathways has created alignment between K-12, postsecondary education, workforce development, and employers so that students have a clear and guided pathway to gain the knowledge and experience needed to move seamlessly into the workforce. We believe that all students deserve access to high-quality careers that provide a living wage and opportunities for advancement.

Tennessee Reconnect has created opportunities for adults to attend a community college or technical college and complete a postsecondary degree or credential, tuition-free. All Tennessee adults who do not already have an associate or bachelor degree are eligible to attend community college or technical college tuition-free starting in the fall of 2018. While TN is making great strides in increasing the number of high school students who enroll in college, we cannot meet the full job market demands without engaging and supporting more adult learners. Tennessee is the first state in the nation to offer tuition-free community or technical college to adults. The Drive to 55 Alliance is helping lead the charge for Tennessee Reconnect through increased private-sector awareness, ownership and support for the long term steps to prepare our workforce and state for the future.

The workforce system is interrelated because the programs and agencies serve either a common customer or are charged with achieving similar employment and education outcomes for their targeted customer groups.

Tennessee's partnerships across local and regional economies, including employers, are making significant strides promoting sector strategies to enhance workforce strategies and activities across the workforce system. This is building not just a kindergarten to job pathway but a true map with data supported programs of study that allows Tennesseans to progress from kindergarten to career with various off and on ramps to gain industry-recognized certifications such as work-based learning, industry lead opportunities with GESTAMP; pre-apprenticeship opportunities in Lake county; career exploration conventions in Northeast; externships for teachers; and work-release programs for the justice-involved populations.

In June 2012, Tennessee was selected to join a multi-state consortium, the Pathways to Prosperity Network, a multistate initiative aimed to address the "skills gap" that threatens the preparedness of young Americans entering the workforce. Entrance into this consortium led to the founding of Pathways Tennessee. The mission of Pathways Tennessee is to provide Tennessee students rigorous academic/career pathways, which are linked to economic and labor market needs and trends. Rooted in the necessity for a well-rounded and balanced approach to preparation, Pathways Tennessee developed and maintains a state level board comprised of various state government departments and private/sector leaders in business. These organizations include:

- Department of Economic & Community Development
- Department of Education
- Department of Labor & Workforce Development
- Governor's Office
- Tennessee Board of Regents System
- State Collaborative on Reforming Education (SCORE)
- Tennessee Business Roundtable
- Tennessee Higher Education Commission
- Tennessee State Board of Education
- Tennessee Independent Colleges and Universities Association

There is a strong correlation between WIOA-defined career pathways and elements, the focus of the Pathways TN initiative, and the leading agencies that are supporting the implementation of both. Pathways TN provides a seamless approach to developing regional, long-term, workforce pipelines in Tennessee and has been recognized as an approach to reach both education goals as well as workforce development goals. This volunteer-driven, unlegislated initiative is being implemented in multiple counties across Tennessee and has proven to be an effective, coordinated effort of resources for lasting economic and workforce development growth. Pathways Tennessee leverages the Career and Technical Education (CTE) programs of study, that reflect 16 nationally recognized career clusters and postsecondary programs; this is done to increase credential and degree attainment for high growth, in-demand jobs in Tennessee. Important to the programs, that make Pathways Tennessee and career pathways initiatives successful in Tennessee, are

the incorporation of work-based learning and access to early post-secondary opportunities (dual enrollment, dual credit, AP, IT, etc.).

Focusing on the Governor's Education and Workforce Development Goal, the division of Career and Technical Education at the Department of Education oversees work-based learning (WBL) in Tennessee. This proactive approach to bridging the gap between high school and high-demand, high-skilled careers consists of 16 nationally recognized career clusters. Each of these clusters seeks to attain the ultimate goal of preparing students for success at the postsecondary level and in their chosen careers. These clusters are organized into 16 broad categories that encompass virtually all occupations from entry through professional levels and are aligned with the U.S. Department of Education's structure of Career and Technical Education. Each cluster is divided into different pathways that are grouped by the knowledge and skills required for occupations in these career fields.

The framework for Pathways Tennessee allows for local flexibility and selection of the clusters that would provide the greatest impact on a local/regional economy. The framework includes the following components:

1) Encourage and support active Industry involvement in student learning: Active industry involvement begins early on in a student's learning pathway. This involvement can and should take on many different forms and should progress in involvement as the student progresses through his/her learning pathway. This type of involvement can represent (1) curricular alignment with labor market needs, (2) student career site visits/employer visits to schools, (3) industry advisory councils, (4) teacher externships and student internships, and/or (5) active work-based learning experiences and internships.

2) Allow for college credit and industry certifications in high school, students should be demonstrating proficiency as they progress through their learning pathway. To ensure students are developing college and career-ready skill sets, robust learning pathways should encourage opportunities for students to demonstrate these skills by means of early postsecondary and industry credentials. A learning pathway and program of study should be seamless from high schools through postsecondary institutions, as students build upon prior learning with stackable credentials at various levels of education. Each credential or degree a student receives will, ideally, translate to the professional continuum in his/her selected career (promotions, qualifications for higher paying positions, leadership roles, post-secondary credit, etc.). Figure 2 demonstrates this concept. This example is from the Therapeutic Nursing Services program of study in the Health Science career cluster. The Certified Nursing Assistant certification serves as a capstone industry certification for this particular program of study. Achievement of this certification reflects attainment of required industry skills to be gainfully employed and/or to continue matriculation to a postsecondary degree or credential.

It is important to note that several stackable credentials can and should be included in a student's pathway. Stackable credentials, such as the Microsoft Office Suite certifications, allow a student to demonstrate proficiency in his/her learning pathway. These stackable credentials are just as important as capstone certifications since they build a student's confidence and demonstrate a valuable portfolio of skills.

1) Transition seamlessly from secondary to postsecondary: Robust, aligned learning pathways have clear goals for student entry into postsecondary institutions. They detail the credential and/or degree a student needs to continue along the desired career path. As Figure 1 & 2 demonstrates, there must be clear, aligned pathways for students to advance from secondary to postsecondary. Middle school courses should lay the foundation for a student's chosen program of study in high school, which should, in turn, prepare that student for the next level of postsecondary coursework - whether this is at a TN College of Applied Technology, a two-year community college, or a four-year university. At each stage of the pathway, the student should be building upon the knowledge and skills learned in previous coursework and demonstrating ongoing academic, technical, and soft-skill mastery.

2) Have multiple entry and exit points robust, aligned pathways with multiple entries and exit points prepare students for life-long growth in their chosen careers. Consider the example of the Therapeutic Nursing Services program of study in the Health Science career cluster. The student is prepared to exit the learning pathway upon high school graduation with a Certified Nursing Assistant certification and go directly into the workforce. However, the student will be equally prepared to take that achieved certification and apply it towards entrance into a Nursing Associate of Applied Science program at a community college and/or move into a nursing program at a four-year university.

3) Have regional workforce relevance: robust, aligned pathways must connect to legitimate opportunities for students in and around their communities. Department promoted programs of study, if implemented with fidelity, should feed directly into related postsecondary programs that are aligned to the needs of regional labor and economic and community development data. These data should reflect high skill, high wage, and high growth opportunities so that students and parents understand the viable opportunities for employment upon graduation from secondary and postsecondary.

Regional workforce development boards are well positioned to develop and expand regional career pathways; this can be done through using the cross-agency supported Pathways Tennessee career pathways framework.

In addition, in an effort to increase the visibility and success of WBL opportunities for Tennessee students, the Department of Education has developed Work-Based Learning Champions. Through a partnership with TNECD and TDLWD, this initiative seeks to champion a talent pipeline in Tennessee through the development and promotion of work-based learning (WBL) to help motivated, mature high school students to pursue lifelong careers in high-wage, high-demand Tennessee industries. Each of the industry participants competes globally for talent and eagerly seek to bridge the skills gap and address workforce demands. The roles and responsibilities/strategic priorities include the following:

- Increase community awareness that WBL can address regional skills gaps and workforce demands
- Sharing WBL messaging with key community stakeholders, leaders, and peers

- Advocates for early and frequent access to TN workplaces and promote student awareness of growing TN careers
- Breaking down barriers that prohibit minors in the workplace
- Championing the access to early grade exposure and career exploration to high growth Tennessee careers
- Developing and promoting a TN Youth Apprenticeship model for motivated and skilled high school students
- Define the gold standard for soft skills in the Tennessee workforce and promote the activities that foster them
- Promoting the adoption and use of soft-skill development strategies and assessments
- Drive the creation and adoption of WBL legislation that encourages hands-on WBL and protects stakeholders
- Promoting incentives and funding solutions to offset liability costs of employers who adopt the TN WBL/Youth Apprenticeship model

In addition, the increased focus on work-based learning (WBL) in Tennessee has expanded the influence of career pathways. In an increasingly complex global economy, all students must be prepared with the intellectual, technical, and social skills needed to compete and contribute meaningfully to their communities. For most, this will mean completing some postsecondary education or training; for all, it will mean learning about themselves and the world of work. WBL is a proactive approach which our state has taken to bridge the gap between high school and high-demand, high-skill careers in Tennessee. Students build on classroom-based instruction to develop employability skills that prepare them for success in postsecondary education and future careers. Through experiences like internships, apprenticeships, and paid work experience, juniors and seniors (16 years or older) may earn high school credit for capstone WBL experiences. WBL Coordinators are educators trained and certified by the State to coordinate these WBL experiences for students. The Department of Education has redesigned its WBL policies and developed new resources to help school districts offer WBL experiences to their students. Updated policies and procedures have been implemented in the 2015-2016 school year and include, but are not limited to, WBL Certification Training; WBL Professional Learning Communities, and a plethora of WBL Coordinator Resources. The integration of industry leaders, workforce development partners, and education policy has proven to be a seamless pipeline to introduce young workers to the growing workforce.

2. Describe the strategies the State will use to align the core programs, any Combined State Plan partner programs included in this Plan, required and optional one-stop partner programs, and any other resources available to the State to achieve fully integrated customer services consistent with the strategic vision and goals described above. Also describe strategies to strengthen workforce development activities in regard to weaknesses identified in section II(a)(2).

## **INDUSTRY AND SECTOR PARTNERSHIPS**

In an effort to support the State's booming economic growth, as well as the three aforementioned goals set out by Governor Haslam, TDLWD has continued to cultivate

and expand partnership with other State departments. The Governor's Job and Economic Development Goal will improve and undergird the partnership between the Tennessee Department of Economic and Community Development (TNECD) and TDLWD. Together, these two agencies, as well as other departments, seek to achieve two main strategies:

1. Develop a multi-agency partnership to address workforce needs across the State.
2. Establish a framework to create innovative workforce partnerships and game-changing education reform for skills in high-demand.

The Department of Economic and Community Development is committed to fulfilling Governor Haslam's vision for Tennessee: to be the 1 location for high-quality jobs in the Southeast. Under the leadership of Commissioner Randy Boyd, TNECD has created five goals to fulfill this commitment. They are:

1. 55% of job commitments will pay above average wages in the county where the project is located
2. Tennessee will be top two in per capita personal income in the Southeast
3. Tennessee will have the highest capital investment per capita in the Southeast
4. Tennessee will have the lowest unemployment rate in the Southeast
5. Tennessee will have zero distressed counties by 2025

To achieve these objectives, the TNECD is utilizing the following 6 strategies:

1. New business recruitment
2. Business expansion
3. Entrepreneurial growth
4. Community development
5. Alignment with education
6. Rural development

Jobs Base Camps continue to be a key element to TNECD's success. With nine regions strategically placed across the State, on a daily basis business development team members are working with businesses within their communities. Each jobs base camp works with local partners to develop and/or revise a regional economic development plan and align existing federal and state resources around that plan. Understanding the workforce is essential for economic development; thus understanding also reinforces the necessity for all State partners to work together to respond to the workforce needs of recruitment and expansion projects. Workforce360° was designed to fill this need.

Workforce360° is a project based system that works directly with companies interested in recruitment and expansion projects in Tennessee. Region-based tactical teams will identify workforce gaps and streamline solutions across the State by utilizing State department communications, interaction and resources. In addition, teams provide a timely response to immediate business workforce needs, and strategic planning for long-term requirements.

Workforce360° is a multi-agency partnership and involves specific, strategic roles from each to target and engage business and industry leaders. These State departments are as follows:

STATE PARTNERS	PARTNER FUNCTIONS
<b>Tennessee Department of Economic and Community Development</b>	Workforce is essential to economic development. A member of the regional team will be designated as your project manager to bring the correct players to the table, as well as ensure that solution strategies are actionable and achieved.
<b>Tennessee Department of Education</b>	Building a future pipeline is vital for continued success. Working with the Department of Education, each company will be able to expose and excite future generations to join its team. Work-based learning, early post-secondary opportunities and the pursuit of industry-recognized certifications are just a few of the opportunities students are currently taking advantage of to ensure they are career and college ready tomorrow.
<b>Tennessee Department of Labor and Workforce Development</b>	A multi-faceted department, this resource is able to supply prospects, provide recruitment tools, pre-screen and test applicants, interview candidates and provide an international job posting service with jobs.
<b>Tennessee Department of Human Services</b>	With a client base of over 500,000 in Tennessee, DHS is charged with evaluating, vetting and providing quality candidates for the industry. With up-skill and training dollars available, these candidates are ready and prepared to enter the workforce.
<b>Tennessee Community Colleges</b>	Established to focus on two-year degrees, the 13 community colleges for an ideal asset for any company to utilize. Quick to react, the main campuses and satellite locations are able to produce programs for short-term training, certifications and associate's degrees.
<b>Tennessee Colleges of Applied Technology</b>	With 27 main locations across Tennessee, these institutes are designed to produce the technical workforce of tomorrow and upskill the workforce of today. With an ability to quickly adapt and customize training, the TCATs are a go-to location for all workforce technical training needs.
<b>Tennessee Department of Veteran Affairs</b>	With over 500,000 veterans calling Tennessee home, there is no shortage of service and honor in the Volunteer state. Programs providing education and training assistance, as well as employment placement, ease the transition for soldiers to move from battlefield to boardrooms and manufacturing floors.

In 2014, Governor Haslam created the Workforce Subcabinet, a collaborative team dedicated to develop and oversee implementation of a three year strategic plan that aligns

State resources in an effort to attain the Drive to 55 goals. The Subcabinet is comprised of the following state departments and leaders: Commissioner Randy Boyd, Chair (Economic and Community Development), Commissioner Raquel Hatter (Human Services), Commissioner Candice McQueen (Education), Interim Vice Chancellor David Gregory (Tennessee Board of Regents), Commissioner Many-Bears Grinder (Department of Veteran Affairs), Dr. Russ Deaton (Tennessee Higher Education Commission), and Commissioner Burns Phillips (Labor and Workforce Development). In addition to the initial responsibility of overseeing the Tennessee Labor Education Alignment Program (LEAP), the Governor's Workforce Subcabinet has developed multiple strategies to aide in the alignment of workforce, education and industry.

Tennessee is actively addressing the challenge to ensure a skilled workforce is available for existing, expanding, and newly relocated companies across the state. In 2014, Governor Bill Haslam challenged Tennessee with the Drive to 55— a statewide initiative to equip 55% of Tennesseans with a postsecondary degree or certificate by the year 2025. Tennessee Promise, Tennessee Reconnect and Tennessee LEAP are three programs under the Drive to 55 initiative which implement strategies to ensure access to postsecondary institutions and to ensure that the needs of industry are aligned with classroom curricula.

Tennessee Promise offers high school students two years of tuition-free community or technical college and offers a mentor to help them through the process. Tennessee is the only State to provide this opportunity. The inaugural high school graduating class of 2015 included participation by nearly 60,000 high school seniors, with 15,895 students using Tennessee Promise benefits beginning in the fall of 2015. Community colleges across the state reported a 14% increase of students enrolling as a full-time student, directly after high school as compared to the percentage in the fall of 2014. As a result of Tennessee Promise, Tennessee leads the nation in FAFSA completion, comprising 40% of the entire country's growth in FAFSA filings in 2015.

Tennessee Reconnect offers adults the opportunity to attend and earn a certificate at any of the 27 Tennessee Colleges of Applied Technology (TCATs) completely free of tuition and fees. More than 10,000 adult Tennesseans completed the online interest forms and 4,921 adult students have entered the inaugural program in fall 2015. This accounts for an 18% increase in enrollment for adults across Tennessee. Of those enrolled with some college credit but no degree 105,000, or over 50%, are predicted to complete their program of study, and 25,000 participants may have enough credit hours to graduate.

Tennessee Labor Education Alignment Program (LEAP) is a \$10 million grant opportunity designed to ensure that postsecondary institutions are producing the skills and credentials that Tennessee employers need through alignment of education and industry. Drive to 55 is not just a mission for higher education, but a mission for Tennessee's future workforce and economic development. In LEAP's first year of operation (2014), 12 grants were awarded allowing Tennesseans from 51 counties to participate in 15,584 training and workforce development opportunities created by LEAP grants. Some highlights of the impact of this program are as follows:

- 1,591 high school students have enrolled in courses that have been initiated or expanded by LEAP programs as of December 2015. Students completing these

courses will be eligible to apply their training to earn college credit in a variety of high-demand fields, such as advanced manufacturing, electrical engineering, and mechatronics. These students will serve as the foundation for new workforce pipelines benefitting the State for many years.

- 630 students have enrolled in community college and TCAT programs supported by LEAP-funded equipment and instructors. These students are eligible to earn Mechatronics and Industrial Maintenance certificates or an Associate of Applied Science degree.
- 13,363 students across middle school, secondary, and postsecondary education levels have engaged in LEAP-funded extracurricular programming, including career readiness initiatives, work-based learning experiences, academic clubs, and career exploration programs.

The Tennessee Longitudinal Data System (TDLS) connects an individual's employment history with data beginning at entry to Pre-K through high school, college, and over the individual's education and skills development life cycles. The system's capabilities will allow the Partners, as well as a consumer-facing interaction to compute performance metrics for Federal and State accountability. These metrics will also be used for informational displays for the general public; the metrics will also provide vital information for researchers and evaluators of WIOA programs and for Tennessee workforce initiatives, such as the initiatives undertaken by the Governor's Workforce Subcabinet and its committees.

The Partners in the work to further integrate and improve TDLS include the Tennessee Departments of Labor and Workforce Development, Education, Children's Services, Human Services and Intellectual and Developmental Disabilities; two others are the Tennessee Higher Education Commission, the University of Tennessee's Center for Business and Economic Research., and the Tennessee Independent Colleges and Universities Association.

All of the core partners also will have performance accountability metrics for each program. The metrics help each partner to further assess how high school achievement, as well as educational attainment overall, impacts skills development and the likelihood of obtaining demand-and industry-level employment at sustaining wages. These dashboards will focus on both pre-program and post-program outcomes.

Serving as the State's primary vehicle to drive cross-sharing and down-sharing of data relevant to the Drive to 55 initiative and Pathways TN, TDLS will leverage current and future investments and developments to provide: on-demand data that are as real-time as possible; recurring intelligence to drive strategic priorities of the Governor's Office and state agencies; user-friendly tools that assist trained users in generating pre-designed and customized reports; and information necessary to assist agencies in articulating "stories" for external customers about critical "focus populations" and Tennessee's citizens as a whole.